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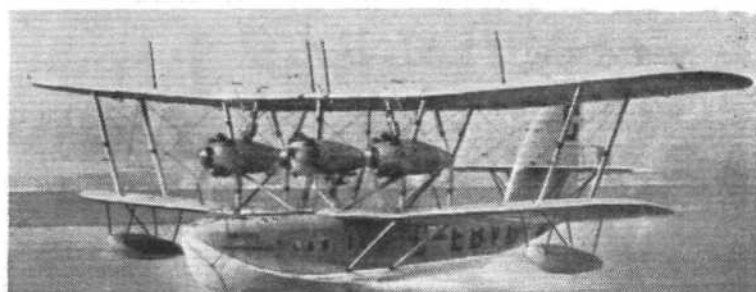
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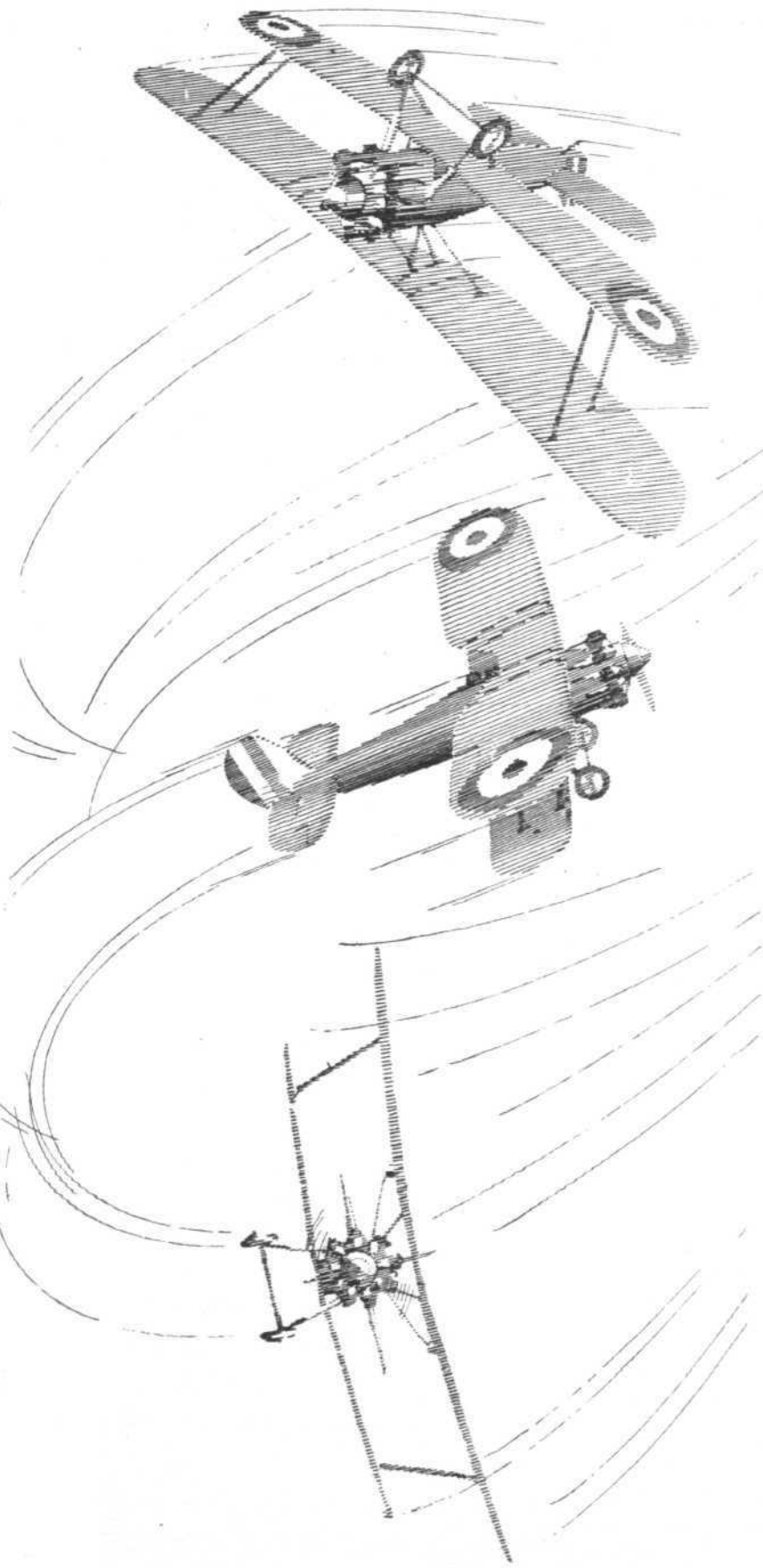
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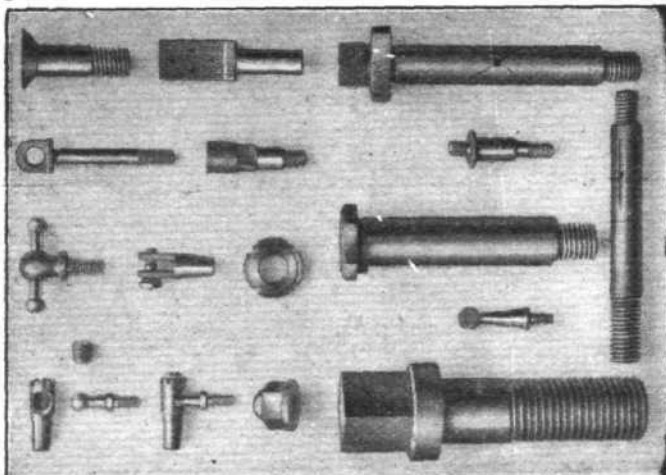
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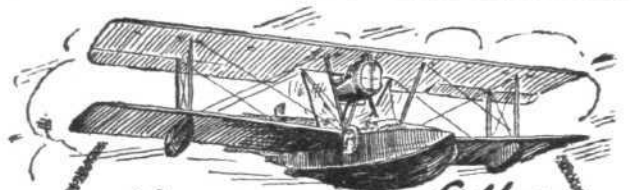
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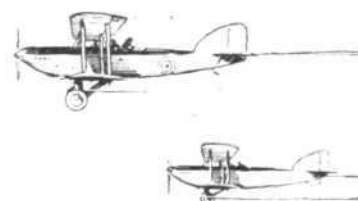
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No. 1046. (No. 2. Vol. XXI.)

JANUARY 10, 1929

Weekly, Price 6d.
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DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in this list—

1929

Jan. 11.... Conference of the F.A.I., Paris
May 21.... Northampton Air Pageant
June Rotterdam International Air Meeting
July 13.... R.A.F. Display at Hendon
July 16-27 7th International Aero Exhibition, Olympia
Oct. 31.... Guggenheim Safe-Aircraft Competition Closes

EDITORIAL COMMENT



Twelve Seconds to 150 Hours

WITH that gift for always saying the right thing at the right time which has made him so popular as president of the Royal Aeronautical Society, Colonel the Master of Sempill referred, in his congratulatory message, to "the magnificent endurance flight which very suitably marks the 25th anniversary of the first flight by the Wright brothers." And it would, indeed, be difficult to imagine a more convincing demonstration of the progress made during the 25 years that have elapsed since Wright first flew at Kitty Hawk than the increase of the world's duration record from 12 seconds to some 150 hours. The feat of the American aviators in remaining aloft in the Fokker monoplane ("?") for this length of time will call forth the unstinted admiration of the whole world. That the crew of the machine were deaf on landing is not surprising. So far, no satisfactory means has been found of silencing the engine and propeller noise of an aircraft. But apart from that, the crew showed little ill effect from what must have been a very trying ordeal. It is not to be expected that in future passengers travelling by air will remain in the machine for such long periods ; at least, not until and unless the noise difficulty can be overcome. But there are several other spheres of future aerial activity in which the ability to refuel during flight may be of very great advantage.

Generally speaking, on a commercial air route there is little to be gained by trying to complete a long journey non-stop in the same machine by refuelling at intervals. Usually it will be a better plan to alight for replenishment, or even to run the service with a relay of machines and pilots. Some little time must necessarily be lost in both these alternatives, but the delay will be compensated for in other ways, such as fresh engines and crew. In cases of special urgency, however, refuelling during flight can be carried out, as the American flight has demonstrated. Then for long non-stop flights made for record purposes, one way of increasing the range at once suggests itself. The range of an aeroplane,

other things being equal, depends upon the load of petrol with which the machine is able to get off. The take-off would be simplified a good deal if the record machine were to take off with but a relatively small quantity of fuel on board and then, once well in the air and having attained a safe altitude, the rest of the petrol could be transferred to it from other machines. Whether such a flight would be classed as "with refuelling" or "without refuelling" might give rise to some discussion at the F.A.I., but the technical aspect is clear enough.

A refuelling flight is no criterion of the aerodynamic and structural efficiency of a machine, such as is a long non-stop flight without refuelling. That is to say, the most inefficient aircraft imaginable can remain aloft as long as the most efficient; it would merely require more frequent refuelling. The great advantage of the refuelling flight is, in our view, that it affords an excellent opportunity for thoroughly testing out the power plant. Test bed results, while valuable in their way, can never entirely simulate actual flying conditions, and it is this gap which such a flight fills so admirably. There is little doubt that in this way defects come to light which would otherwise take a very long time to discover. Not only the engine itself but its accessories, installation, petrol and oil systems, and in short, everything connected with the power plant are thoroughly and rapidly tested. Defects that have developed can be put right and another flight made. It would even appear that it might come to be normal practice for an engine firm to keep its own aircraft for carrying out development work actually in the air, after the preliminary work on the test bench.

❖ ❖ ❖

A
Great Little
Lady

Exactly how many miles she has covered during her long flight is difficult to estimate; nor is this necessary for a full appreciation of the merits of Lady Bailey's flight from London through Africa to the Cape, around Africa and home again. The general press has made much of the fact that Lady Bailey's flight is the longest ever accomplished by a woman, and the longest solo flight ever undertaken, thus establishing two "records." To us that is of very minor importance. What matters is that an Englishwoman should have chosen to see Africa from the air, and should have been prepared to rely entirely on her own resourcefulness in making the tour. Everyone who knows Lady Bailey at all well realises that personal "advertisement" is the last thing she would desire; she is the most modest and unassuming of women. But her great achievement must unavoidably bring her into the "limelight." From her point of view the whole thing resolved itself into this: She wanted to tour Africa; she was already a private owner-pilot. What more natural, then, than that she should make the tour by air? Only those who have a fairly good knowledge of Africa, with its variety of country and climate, can realise the sort of task Lady Bailey set herself. That she should have completed the tour, as far as Paris, there to be held up by fogs, is but the irony of fate, and is an experience which has befallen many air

travellers. Her great flight was in any case a tour and not a spectacular "stunt" flight intended to break records, so we should not let the delay on the final stage be regarded as other than one of many incidents on a tour that must have been full of surprises and disappointments. Through tropical heat, in rain or snow, across mountains, deserts and seas, Lady Bailey carried on with that quiet determination which is, we like to think, a characteristic of our race, and her de Havilland "Moth" and "Cirrus" engine did not let her down. England is proud of the trio and of its achievements.

❖ ❖ ❖

"Avion-
Aviso"

It is very doubtful whether, in this country, there is a full appreciation of the great work done by the French *Compagnie Générale Aéropostale* with the aeromarine service between France and South America during last year. Our excellent French contemporary *L'Aéronautique* publishes, in its December, 1928, issue, an account of some of the work done, and from this it appears that on December 1 of last year, 80 single journeys had been completed between Toulouse and Buenos Ayres, while on November 20 the extension to Santiago du Chile was completed for the first time. The aeromarine service was operated partly by aircraft and partly by surface vessels, and was a weekly service. Only two mails failed to get through, of which one was interrupted through the imprisonment of Reine and Serre in Rio de Oro, while the other was partly destroyed by a fire the cause of which has never been fully ascertained.

Graphs given by our contemporary show not only the saving in time which the aeromarine mail has given in comparison with the normal steamer services, but also the improvement in the service itself from the start in March to the end of October. At first the aeromarine mail took 17½ days from S. America to France. In October this was reduced to 10½ days. In the opposite direction, the corresponding figures were 15 days and 9½ days respectively. The average time taken by boat was about 20 days, so that a very considerable saving was effected. The distance between Toulouse and Buenos Ayres is about 8,000 miles, of which the section between St. Louis and Natal (about 2,150 miles) was operated by surface vessels. The combination increased the speed over the route to nearly double that of the mail steamers, and by the extension of the air mail to Chile, Santiago was actually brought within 10 days of Paris. Truly a remarkable achievement of which France may well be proud. The excellent results, our contemporary states, were primarily due to the skill and determination of the pilots, who flew by day or by night, in fair weather and foul.

Our own experience on the London-Paris route in the early days of commercial aviation was very similar. There also the work was carried out in all sorts of bad weather by pilots who showed indomitable courage. But whereas we have still not progressed much beyond the London-Paris stage, our French friends have got as far as Santiago in Chile in 10 days! Truly, this "gives one furiously to think."

◆ ◆ ◆ ◆

Berlin Air Conference

On January 4, an international conference of air traffic companies, at which Great Britain, Germany, France, Belgium, Denmark, Holland, Austria, Russia, Sweden, Switzerland, and Czechoslovakia, are represented opened in Berlin. The

summer flying programme on international routes was discussed.

Rolling Along

An American pilot, Dale Red Jackson, has been credited with a performance of 417 "rolls" in the air.

THE CHICAGO INTERNATIONAL AERONAUTICAL EXPOSITION

WHAT was probably the largest aero show ever organised in America was held at Chicago from December 1 to December 9 last. Thanks to that enthusiastic follower of aeronautics, Lady Heath—who is now on a "Flying visit" to the States—we are able this week to give our readers the following notes on the outstanding features of this aero show.

Although intended by its organisers to be an international affair, this was by no means the case, for with the exception of two or three aircraft and a few aero engines, the exhibits were of American origin. It was, nevertheless, an exceptionally interesting and representative exhibition, the attendance was good, while during the run of the show a number of conferences and other functions were held, which many well-known people—both American and international—connected with aviation, attended. There were altogether some 197 exhibitors, of which 18 represented aero engines and 55 aircraft. Some of the aircraft firms showed several

conventional design. There were also only a few new types—prominent amongst which may be mentioned the Fokker Amphibian mono-flying boat, the light 'plane and new Whirlwind cabin 'plane of the Fairchild Company, and the "Monocoach" and "Monoprep" of Mono Aircraft.

Other machines of special interest were the Sikorsky and Loening amphibians, and the large Boeing and Ford multi-engined cabin 'planes. Enclosed machines were very much in evidence, and the monoplane—especially *a la* Lindbergh's famous Ryan—was a popular type amongst constructors. We are unable to give a detailed description of the various machines exhibited—although, we hope, in future issues of *FLIGHT* to describe some of the more interesting types—and can only give a list of the different firms exhibiting (which, we think, may be of interest), together with a few notes concerning the light 'planes on view.

Hitherto, the light 'plane, as it is known on this side of the Atlantic, has not made much headway in America, but



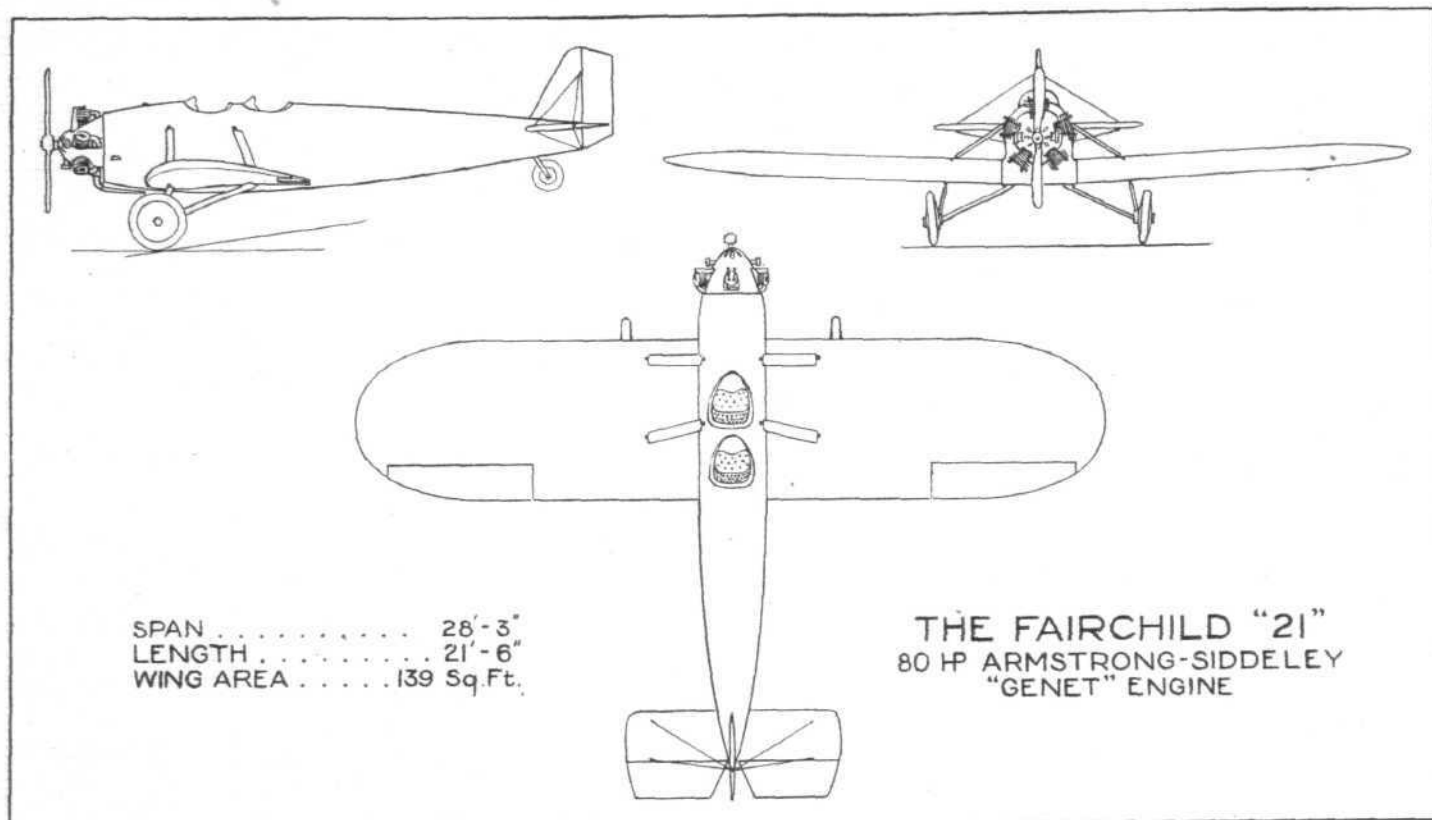
THE CHICAGO AERO EXPOSITION: Four representative types of aircraft out of the seventy odd on view—(1) Curtiss "Robin" 3-seater monoplane 170 h.p. Curtiss "Challenger". (2) Mohawk "Pinto" light monoplane (60 h.p. "Velie"). (3) Keystone-Loening Amphibian Air Yacht (500 h.p. Wright "Cyclone"). (4) Sikorsky Amphibian 8-passenger transport (two 425 h.p. Pratt and Whitney "Wasps").

types of machines, so that actually there were over 70 machines on view. Great Britain was represented both by aircraft and engines—in the former by the D.H. "Moth" light plane fitted with a "Gipsy" engine exhibited by the Moth Aircraft Corp. (with its Vice-President in attendance); and Lady Heath's Trans-African Avro "Avian," polished and cleaned up, on Air Associate's Stand. British Aero engines were represented by the "Cirrus," exhibited by Campbell Peterson and Co.—who handle these engines over there—with Capt. Lancaster in attendance, and Lady Heath giving a series of hourly talks on the construction and upkeep of the "Cirrus" engine. Another British engine was the Armstrong-Siddeley "Genet" air-cooled radial, which is fitted in the new Fairchild light 'plane.

As we have said, the aircraft exhibits were a representative collection, almost every type and size being on view, varying—as Lady Heath describes it—from some extraordinarily "tin-pot" structures, which it seemed hard to believe any aeronautical body would certify, to other splendid machines which signified airworthiness at first glance. From the technical point of view the exhibits did not display anything of a startling nature, and most of the machines followed

judging from several of the exhibits at the Chicago show this type machine—the small single or two-seater fitted with a low-powered engine—is now receiving the attention of American constructors. Lady Heath kindly sent us brief particulars of the light 'planes at Chicago, which, apart from the foreigners (the Avro "Avian," the D.H. "Moth" and the Klemm-Salmson which is handled in the States by the Aeromarine-Klemm Corp.) included the following:—

The Simplex "Red Arrow," constructed by the Simplex Aircraft Corp., of Defiance, Ohio. A two-seater (side-by-side) tractor fuselage monoplane. The fuselage, of steel-tube construction, is very finely streamlined, and the wings, of "semi-cantilever" type, are mounted half-way-up the fuselage. Incidentally, as Lady Heath points out, there is no protection whatever for pilot and passenger should the machine turn over. Visibility, however, is very good, mica windows being let into the sides of the fuselage forward for this purpose. The "Red Arrow" has a good performance, having a speed range of 38–125 m.p.h., a climb of 1,000 ft. per min., and a service ceiling of 16,000 ft. A choice of four engines is provided, either of the air-cooled radial (such as the 100 h.p. Warner "Scarab") or the 4-cyl.



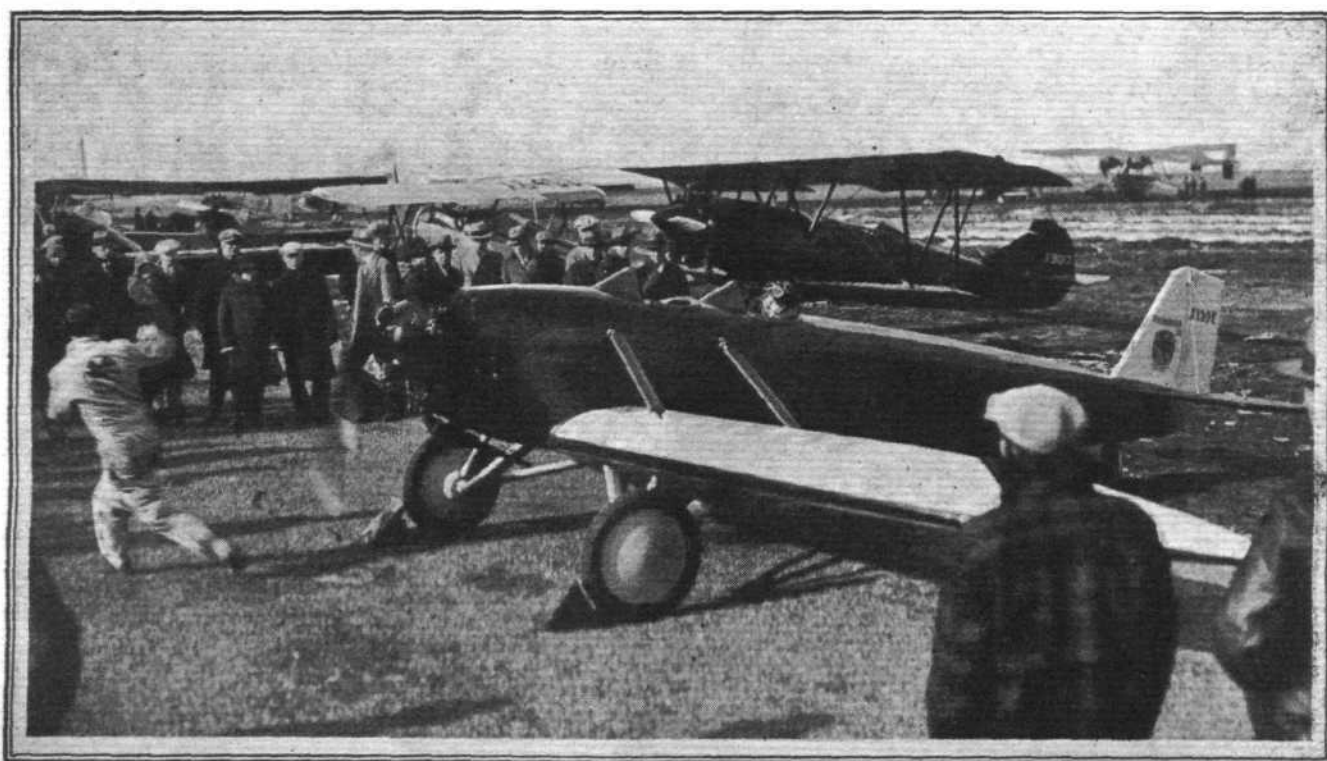
THE FAIRCHILD 21 : General arrangement drawings of a new light 'plane (80 h.p. Armstrong-Siddeley "Genet") exhibited at Chicago

in-line air-cooled type. The undercarriage is of the non-axle type, with wide track and rubber or hydraulic absorbers. The principal characteristics are—Span, 34 ft. 3 in.; O.A. length, 20 ft.; chord 5 ft.; weight, empty, 1,100 lbs.; total weight, 1,800 lbs.

The "Arrow Sport"; constructed by the Arrow Aircraft & Motors Corp., of Havelock, Neb., is a two-seater (side-by-side) tractor fuselage biplane, with cantilever wings set at a pronounced forward stagger. The fuselage is constructed of welded steel tubing, and the wings have wooden ply box spars. Having cantilever wings (Eiffel 358 section is used) there are no bracing wires, but the wings are separated by N interplane struts (one set each side), four struts supporting the top plane above the fuselage. The power

plant consists of a 60 h.p. Le Blond air-cooled radial engine. The undercarriage, which is of the V type, appears to be none too robust, especially as regards the rear compression strut, which extends from the wheel to the top fuselage longeron. Characteristics: Span, 25 ft. 6 in.; O.A. length, 19 ft. 2 in.; wing area, 178 sq. ft.; weight, empty, 757 lbs.; total weight, 1,200 lbs.; speed range, 34—108 m.p.h.; climb, 1,000 ft. per min.; service ceiling, 16,000 ft.

The Driggs "Skylark," constructed by the Driggs Aircraft Corp., of Lansing, Mich., is a two-seater (tandem) tractor fuselage biplane with large top plane and small lower plane. The wings do not fold, but the top plane is in three sections with quick detachable fittings. N.A.C. M.18 (modified) wing section is employed, giving great stability, and the



AT THE CHICAGO AERO SHOW : During the show some 200 aircraft gave practical demonstrations at the Chicago Airport. Above, Lady Heath is shown about to try out the Fairchild 21 light 'plane



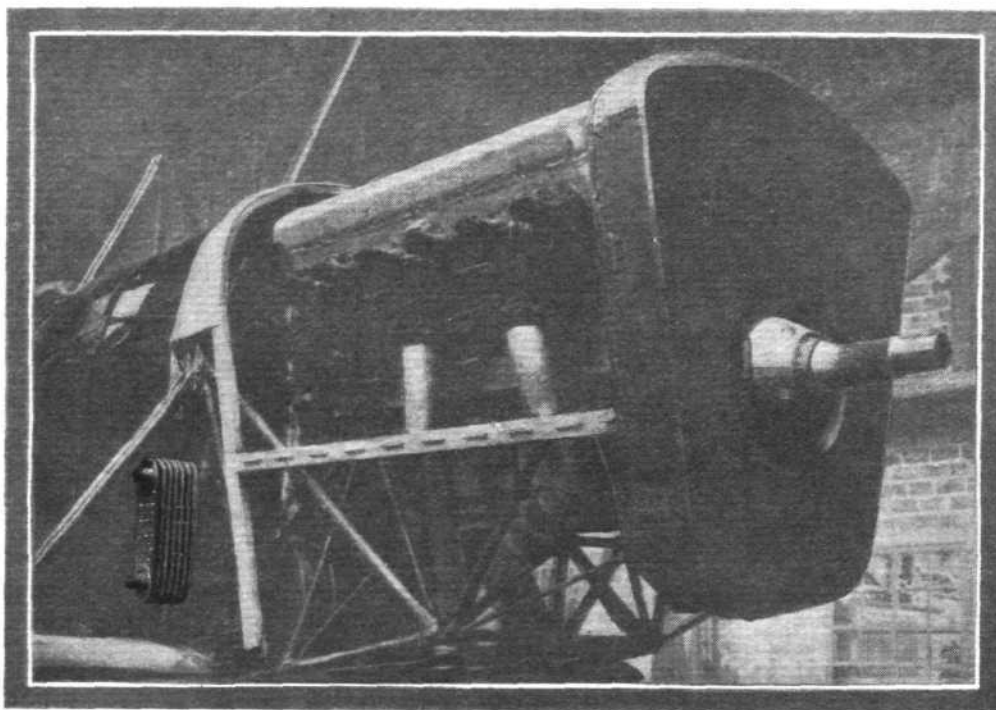
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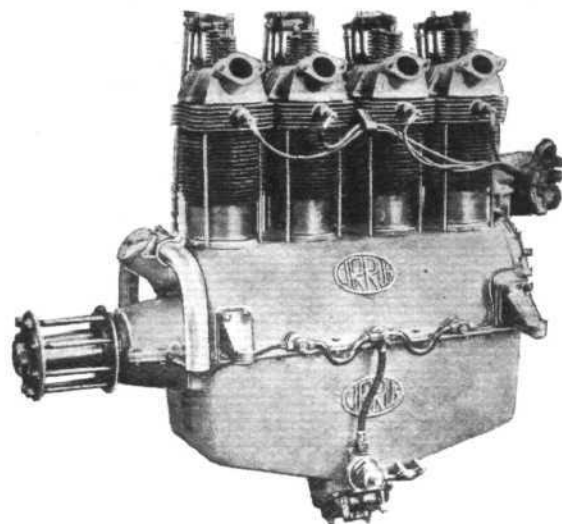
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external bracing is by Warren truss. Wing spars are of spruce and the ribs of pressed dural. The fuselage is of welded steel tubing and of good streamline shape. A split undercarriage is provided, but "Edo" floats can also be fitted. The power plant is a 55-60 h.p. "Rover" 4-cyl. in-line inverted air-cooled engine designed by H.E. Morehouse. The principal characteristics of the "Skylark" are: Span, 32 ft.; O.A. length, 20 ft.; weight, empty, 665 lbs. (seaplane, 815 lbs.); total weight, 1,115 lbs.; speed range, 42-110 m.p.h.; climb, 900 ft. per min.; ceiling, 20,000 ft.; cruising range, 300 miles.

The Heath Parasol, constructed by the Heath Airplane Co., of Chicago, is a lightly built high-wing monoplane, fitted with a 65 h.p. 4-cyl. in-line air-cooled Henderson engine. It has a speed range of 28-70 m.p.h., and is claimed to be very easy to fly.

The Mohawk "Pinto," constructed by the Mohawk Aircraft Corp., of Minneapolis, is a two-seater low-wing cantilever monoplane, fitted with a 45 hp. "Velie" engine, of decidedly pleasing appearance. We understand that the makers are experimenting with other types of engines, but are not permitted to use an engine exceeding 250 lbs. in weight. The wings, employing U.S.A. 35 (modified) section, have box spars and solid ribs, and are constructed of selected spruce, Haskelite plywood, and Macwhyte tie rods. The fuselage is made of C-M. steel, and the undercarriage is of the non-axle type, consisting of two V's carrying the wheels and attached to the fuselage and a vertical "Gruss Air Spring" shock absorber extending from the wheel to the wing. Characteristics:—Span, 30 ft. 6 in.; O.A. length, 22 ft.; wing area, 124 sq. ft.; weight, empty, 850 lbs.; total weight, 1,350 lbs.; speed range, 35-100 m.p.h.; climb, 650 ft. per min.; cruising range, 4 hrs.

The Aeromarine-Klemm.—This German light 'plane is handled in America by the Aeromarine Klemm Corp., of New York—who exhibited a Salmson-engined model—and is already sufficiently known to our readers to need any further comment here.

The Fairchild 21, was perhaps the most interesting of the light 'plane exhibits. It was one of three types shown by the Fairchild Airplane Mfg. Corp., of Long Island, N.Y., being one of the latest—and to a certain extent, experimental—types produced by this firm. It is a two-seater (tandem) low-wing "semi-cantilever" monoplane fitted with an 80 h.p. "Genet" engine. The wings have spruce box spars, double drag bracing, and employ the Gottingen 387 wing section. The fuselage is of C.M. steel-tube construction, jugged for interchangeability, and the landing gear is of the non-axle type, 8-ft. track, with oil and spring action giving 10½ in. vertical travel. The wheels are fitted with brakes while a swivel tail wheel is used instead of a tail skid. Dual control—stick and rudder pedals—is provided. Characteristics: Span, 28 ft. 3 in.; O.A. length, 21 ft. 6 in.; wing area, 139 sq. ft.; weight, empty, 755 lbs.; total weight, 1,250 lbs.; speed range, 40-105 m.p.h.; climb, 700 ft. per min.; cruising range, 425 miles.

Mono Aircraft Inc. of Moline, Ill., exhibited a "Mono-

coupe" light 'plane fitted with a 60-h.p. "Velie" engine—the same type of machine which has been introduced into England by Mr. Irving. The "Monocoupe" is a two-seater (side-by-side) high-wing cabin monoplane, not unlike the Belgian Demonty Poncelet and it has already obtained a certain amount of popularity in America. Its fuselage rises sharply from the tail up to the straight wing, that portion immediately below the latter being cut away to receive a large window extending right round from sides to front and thus forming a roomy cabin. The wings are braced by a pair of struts on each side, extending from the lower longerons up to the wing spars. A non-axle type undercarriage is fitted, and this can, we believe, be changed for floats. Characteristics:—Span, 32 ft.; o.a. length, 20 ft.; weight empty, 795 lbs.; total weight, 1,350 lbs.; speed range, 37-97 m.p.h.; climb, 800 ft. per min.; ceiling, 13,000 ft. cruising range, 500 miles. This firm also exhibited two other types—the "Monoprep," a training machine very similar to the "Monocoupe," but with open cockpits; and the "Monocoach," a four-seater and larger edition of the "Monocoupe" fitted with a 170-180-h.p. Velie.

Another light 'plane at the Chicago show was the "Szekely," a low-wing monoplane made by the Szekely Aircraft Corp. of Holland, Mich. This machine, which is powered with a 40 h.p. Szekely is of very light construction, and is said to have a speed range of 30-80 m.p.h.

In conclusion, we give a list of the firms exhibiting aircraft:—Advance Aircraft Co. (3 "Wacos"); Aerial Service Corp.; Aeromarine Klemm Corp.; Aire-Kraft, Inc.; Alexander Aircraft Corp. (1 "Eaglerock"); Alliance Aircraft Corp. (1 "Argo"); American Eagle Aircraft Corp. (3 "Eagles"); Arrow Aircraft Corp. (1 "Arrow-Sport"); Atlantic Aircraft Corp. (3 Fokkers); Bellanca Aircraft Corp.; Boeing Airplane Co.; Buhl Aircraft Co. (2 "Airsedans"); Butler Aircraft Corp.; Campbell Peterson & Co. (Avro); Capital Aircraft Corp.; Cessna Aircraft Corp. (2 monoplanes); Chance Vought Corp.; Commandaire, Inc. (2); Consolidated Aircraft Corp. (2 "Huskies"); Curtiss Flying Service; Curtiss Robertson Airplane Mfg. Co. (1 Curtiss "Robin"); Driggs Aircraft Corp.; Fairchild Aviation Corp. (3 types); Ford Motor (1 tri-motor); Gates Day Aircraft Corp.; General Airplanes Corp.; Great Lakes Aircraft Corp.; Hall-Aluminium Aircraft Corp.; Hamilton Metalplane Co.; Heath Airplane Co.; Keystone Aircraft Corp.; Kreider Reisner Aircraft Co. (1 "Challenger"); J. Kreutzer Corp.; Laird Airplane Co. (2 types); Lockheed Aircraft Corp.; Loening Aeronautical Engineering Corp.; Mahoney-Ryan Aircraft Corp. (2 Ryans); Mohawk Aircraft Corp. (1 "Pinto"); Monarch Aircraft Co. Inc.; Mono-Aircraft, Inc. (3 types); Moth Aircraft Corp.; National Air Transport (1 Ford tri-motor); Phantom Knight Aircraft Corp.; Pitcairn Aircraft Inc. (2 types); Sikorsky Mfg. Corp.; Simplex Aircraft Corp. (2 "Red Arrows"); Spartan Aircraft Corp.; Star Aircraft Co.; Stearman Aircraft Co. (2 types); Stinson Aircraft Corp. (2 types); Stinson School of Aviation; Swallow Airplane Co. (3 types); Szekely Aircraft Corp.; Travel Air Mfg. Co. (3 types); Wallace Aircraft Co.

THE ROYAL AERO CLUB OF THE U.K.

OFFICIAL NOTICES TO MEMBERS

SCHNEIDER CONTEST, 1929

A MEETING of the Schneider Committee was held on Friday, January 4, 1929.

Present.—Royal Aero Club: Lieut.-Col. M. O'Gorman, C.B., in the chair; Lieut.-Col. M. O. Darby; Capt. C. B. Wilson, M.C. Air Ministry: Major J. S. Buchanan, O.B.E.; R. H. S. Mealing; Wing-Commander S. W. Smith, O.B.E. Society of British Aircraft Constructors: Commander James Bird; H. Burroughes; Lieut.-Col. L. F. R. Fell; H. T. Vane, C.B.E.

In Attendance.—H. E. Perrin, secretary; B. Stevenson, assistant secretary.

Squadron-Leader R. L. G. Marix, D.S.O., and Lieut.-Col. L. F. R. Fell, were elected to the Committee.

Entries.—The following entries were reported:—

Italy, 3; France, 3; America, 1; Great Britain, 3.

The general arrangements for the Contest in 1929 were discussed.

LIGHT AEROPLANE—WORLD'S RECORD

THE Fédération Aéronautique Internationale has notified the Royal Aero Club of the granting of a World's Record to Mr. Alan S. Butler, who on December 7, 1928, on the 100-km. course, Edgware-Reading, accomplished a speed of 192·864 km. per hour, on the D.H. Gipsy "Moth." This record is in the two-seater class for light aeroplanes, and Mrs. A. S. Butler was the passenger.

THE LATE MR. FRANK HEDGES BUTLER

MRS. VERA ILLID NICHOLL, the only daughter of the late Mr. Frank Hedges Butler, who made the inaugural balloon ascent in 1901 with her father in connection with the formation of the Royal Aero Club, has presented 18 volumes of press cuttings, dealing with aeronautics dating back to the beginning of the last century, to the Royal Aero Club.

Offices: THE ROYAL AERO CLUB,

3, CLIFFORD STREET, LONDON, W.1.

H. E. PERRIN, Secretary

NATIONAL FLYING SERVICES, LIMITED

Official Particulars of the "Guest Scheme"

It is now several months since FLIGHT first called attention to a movement for unifying in one company all civilian flying within Great Britain. It was then an open secret that the moving spirit of the new scheme was Squadron-Leader the Rt. Hon. Frederick E. Guest, C.B.E., D.S.C., M.P., and that the new company about to be formed had been assured of Government support in the form of a subsidy based upon the number of pilots turned out.

Captain Guest, as readers of FLIGHT will scarcely need to be reminded, was Air Minister some years ago, and is still closely connected with aviation in that he is in command of No. 600 (City of London) Bombing Squadron. Lest foreign readers of FLIGHT should, from this fact, jump to the conclusion that there is some sinister motive behind what has come to be known as "The Guest Scheme," we might point out that No. 600 Squadron is one of the Auxiliary Air Force Squadrons, i.e., a "Citizen Air Force Squadron," and that Captain Guest is not training huge numbers of pilots for military services.

The new company will be known as "National Flying Services, Limited," and the Managing Director will be Lieut.-Col. I. A. E. Edwards, until recently Chief Technical Adviser to the Director of Civil Aviation. It is to Col. Edwards that we are indebted for the following information regarding National Flying Services, Limited.

Landing Grounds the Fundamental Basis

"N.F.S.," as we will call the new company for the sake of brevity, is basing its activity on the establishment of a number of aerodromes and landing grounds throughout the United Kingdom. The present intention is that there shall be 22 main aerodromes at towns not yet definitely chosen, but which will be large provincial centres, and 100 smaller aerodromes, which may be regarded as intermediate landing grounds, situated at suitable locations throughout the country. These 100 intermediate landing grounds will, at least to begin with, be on a very modest basis as regards equipment, and will have merely petrol and oil supplies, and a telephone, although the size of the aerodrome itself will, of course, have to be almost the same as that of the main provincial centres.

At each of the 22 main provincial aerodromes there will be a club house where meals can be served, dances held, and similar social functions, and it is intended that all these club houses shall be planned on exactly similar lines, so that a visiting member of another club may feel entirely at home.

At each of the main provincial centres it is intended to station permanently four aeroplanes, and the regular personnel will here include two pilot-instructors, two ground engineers, two assistants, and club-house staff, etc. The club fees have not yet been definitely decided upon, but it is likely that for the London club the entrance fee will be £5 5s., with an annual subscription of similar amount for flying members, while for non-flying members the corresponding figure will probably be £3 3s. At the provincial centres it is likely that the corresponding figures will be three guineas and one guinea respectively. At each centre there will be two locally-appointed committees, one house committee and one general.

The flying fees will, in all probability, be of the order of £2 per hour for dual instruction, 35s. per hour for solo under instruction, and 30s. per hour for pure solo flying. Pilots holding an "A" licence will receive the benefit of a considerable reduction.

Headquarters will be established in London, and the official address will be announced shortly. In the meantime, letters addressed to the new company at Dorland House, Lower Regent Street, London (c/o Speed Hire, Ltd.), will suffice. The London centre will be at Hanworth Park, where club premises will be established, and also a repair shop for aircraft and engines, it being the intention of the company to carry out all repairs there, and not to send machines or engines back to the makers.

One part of the new scheme will deal with the rapid replacement of damaged aircraft. If it is assumed, for example, that a club in the north has had the misfortune to damage one of its school machines, instead of having to be without one of its machines for the period taken by the repairs, the club will telephone to London headquarters, saying, "We have crashed machine G-AXYZ, will you send a replacement." At once one of the company's "ferry-pilots" will set off in a spare machine and fly it to the club in question, and by the next day the club's equipment will again be up to strength, the damaged aeroplane being sent to London for repairs.

Taxi Services

Taxi work occupies an important part of the new scheme, it being the opinion of those responsible for the management that a large demand is likely to grow up once the organisation is complete and in operation. In this connection, the distribution of provincial centres is important: Taxi work a long way from London is likely to be expensive if the machine has to go first from London to some provincial town, there to pick up its passenger and then take him to another provincial town. With centres distributed all over the country, a demand for hire can be filled from the nearest centre. It is contemplated to use the club machines partly for this kind of work, it being maintained that the club activities are particularly intense around the week-end, but likely to be slack during the week, and that a club machine could well do taxi work and earn revenue instead of standing idle between the morning and evening school work.

Types of Machine

We understand that, although standardisation will naturally be an important feature of the scheme, so far no type has been definitely chosen. It seems likely, in fact, that not one but two types of light aeroplane will be adopted. On the engine side, however, one particular type will definitely be adopted to ensure uniformity and simplicity. What that type will be we are not permitted to state at the moment.

In addition to the standardised club machines, it is likely that other and larger types may also be taken into service for special work. For instance, it is intended to establish aerodromes and centres close to large seaports, so that foreign passengers arriving in this country and wishing to see certain parts of it in the shortest possible time will be able to make arrangements to go from the steamer to the aerodrome and be flown to the places it is desired to visit. This will enable Americans in a hurry, for example, to "do" the more famous places in England in a couple of days or so. For certain kinds of work, machines of types other than the standard club types may be required, and doubtless such will be acquired as necessary. "Joy-riding" will also be catered for, partly with club types of machines and partly by other types if it is found convenient to do so.

Service

Service in every possible way is to be the motto of the company, and in addition to the direct service in the way of machines and engines to which reference has already been made, it is intended to establish an information bureau where all sorts of information will be available and where, if he so desires, a pilot-owner can go and state his requirements for a tour through Europe, for example. The bureau will collect all the necessary information, will supply maps of the route, particulars of aerodromes abroad and any restrictions, etc., that may be in force. Thus, it is hoped to encourage touring by air. At present it is thought that many owner-pilots refrain from such tours not on account of the expense but because of exaggerated ideas of the rules and regulations which govern flying abroad. All these will be explained to him at the bureau, and all necessary documents obtained on his behalf.

As "Feeder Lines"

It is not proposed, at first at any rate, to establish regular air routes to connect up with Croydon, but any passenger from the north who has hitherto been using boat and train can readily hire a machine to take him from his own locality direct to the aerodrome at Croydon. Thus, he will save a great deal of time, and the use of the regular service from Croydon may become worth while in many cases where it is not so now, owing to the time taken by train to London and the journey out to Croydon. Again, a passenger arriving by air to Croydon for some destination in the North can have a small taxi machine meet him at Croydon and take him direct to his destination.

Subsidies

The basis of the subsidy which, we understand, the Air Ministry has agreed to grant is £10 per pilot turned out, for the first three years, and £5 per pilot for the next seven years (the subsidy being on a 10 years' basis). For the first three years a maximum of £15,000 per annum has been fixed, with a maximum of £7,500 per annum for the last seven years. The company will, however, be permitted to carry over, so that if the maximum is not earned during the first year, the balance becomes available during the following year, and so on. The maximum amount which the tax-payer will be called upon to supply will therefore be £97,500, spread over a period of ten years.

R.A.F. Far East Flight

“THE eight Napier ‘Lion’ engines have each run something like 400 hours, or a total for the eight engines used of 3,200 engine-hours. As far as we have been able to ascertain, this was done without serious trouble. Truly a remarkable testimony to—

‘The engine which never lets the R.A.F. down’!

To Group-Captain Cave-Browne-Cave and the crew of the four machines, the greatest possible credit is due for having successfully accomplished a task that cannot by any means have been an easy one, and the Royal Air Force and the British Empire are proud of them. To the Supermarine and Napier firms, whose machines and engines made the cruise possible, British aviation also owes a debt of gratitude for having contributed their share towards this convincing demonstration of the high qualities of British aviation *materiel*.”

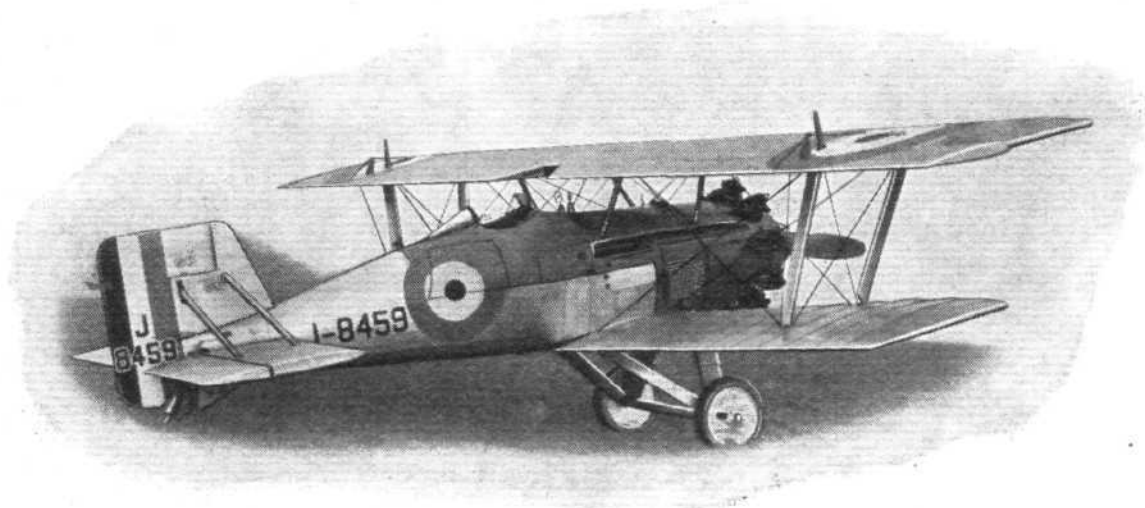
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13 Dec. 1928

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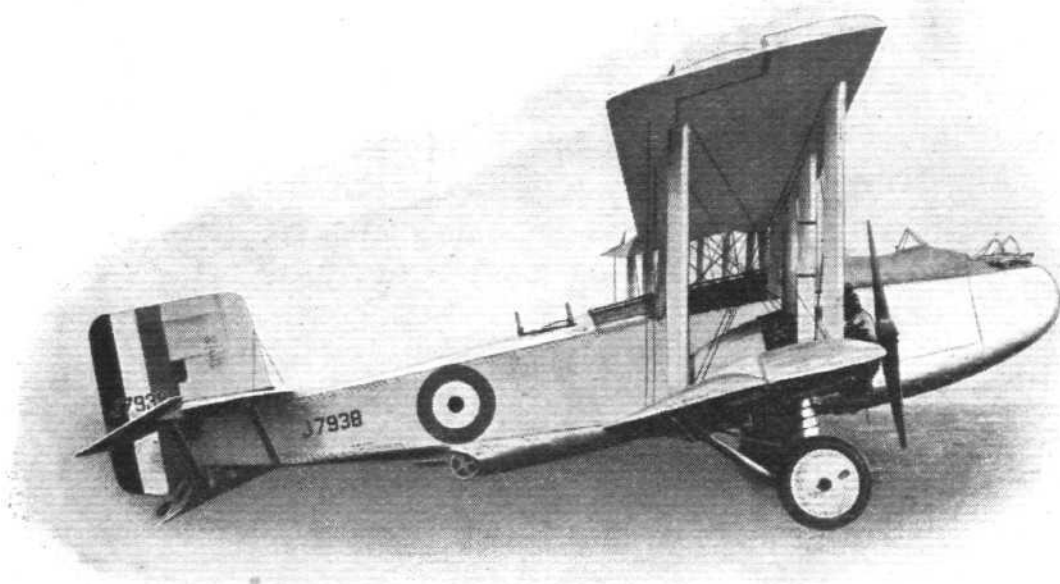
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METALLISING NON-CONDUCTORS

The Einstein Electro-Chemical Process

LORD Thomson presided at a luncheon given at the Ritz Hotel on January 8 to introduce the Einstein electro-chemical process for coating all manner of non-conductive materials with metal. Samples of materials were exhibited, including three airscrews of wood, upon the surface of which had been deposited different metals in different thicknesses. The Einstein process will not be entirely new to readers of *FLIGHT*, as reference was made to it some months ago, when the British rights were supposed to have been acquired by the now defunct company, British Airships, Limited. At the luncheon, on Tuesday last, no details were given as to how the Einstein process is to be introduced in this country beyond the statement that the parent company is to be a British one. Whether that company has already been formed or whether it is in process of formation was not stated. Remarks dropped by some of the speakers indicated that at present Mr. Einstein has works in Paris, where apparently some of those present had seen his process in operation. But no technical information was to be extracted, and in the absence of such, it is impossible to express an opinion of the merits or otherwise of the Einstein electro-chemical process.

As far as we can gather, the Einstein process has for its basis the invention or discovery by Mr. Einstein of a preparation which, if applied to the surface of any material (whether by spraying, dipping or with a brush we have not been able to find out), renders that surface electrically conductive, when, of course, metals can be deposited on it as in ordinary electro-plating. The merits claimed for the invention lie, it seems, in the fact that the Einstein preparation penetrates farther into the material than has hitherto been possible, and as the metal deposit follows the preparation, the metallic coating also penetrates fairly far into the material. The process is claimed to be very cheap, although in the absence of figures this vague term conveys but little.

The claim advanced for the Einstein process is that not only does it enable non-metallic materials to be coated, but to be coated with almost any metal. Samples of three-ply wood were exhibited, upon which had been deposited zinc, brass, copper, aluminium, silver and gold. The coating was fairly thick (in most cases, 0.25 mm.), but the grain of the wood was

still repeated on the surface (obviously one can hardly say that the grain was "showing through" the metal). For decorative purposes this may have great advantage. For aircraft it is immaterial.

We gather that experiments have been made with wooden airscrews coated with metal, and that during tests run at high speeds there was no sign of the metal coating breaking away from the wood, nor of it cracking under the vibrations. Whether without undue weight, a sufficient thickness of metal coating can be used to prevent damage by rain and hail still remains to be seen. Should this be possible, the Einstein process might give the wooden airscrew a new lease of life. In view of the short life of the metal tips now used on wooden airscrews, it would seem that a fairly considerable coating will be necessary.

For wooden seaplane floats the process might have advantages, and also for wooden seaplane hulls, if the metal coating is found to reduce or overcome water absorption. That such a coating would materially strengthen a hull appears doubtful, and we think the process should be regarded more as a possible form of surface treatment to prevent soakage. Whether it could be applied to the coating of Duralumin hulls with some metal proof against corrosion we do not know. The size of tank necessary for the complete submersion of a large flying-boat hull would be somewhat of a drawback unless considerable quantities were to be so treated.

It would appear that one immediate use, as regards aviation, to which the Einstein process might be put would be the coating of parts made in magnesium alloy. Whether this is possible or not we do not know, but if it is, and a non-corrosive metal could be deposited on the surface of a magnesium alloy part, a large number of uses at once suggest themselves. Crankcases of aero engines, for example, might then be made of this very light alloy, and protected against corrosion by a coating of other metal. The cost in this case would be a secondary consideration, and of minor importance.

Until more is known of the details, it is impossible to express an opinion of the merits of the Einstein process. That some extraordinarily interesting and pretty work has been carried out by it is certain. Its applications to aviation still remain to be proved.

MR. G. HOLT THOMAS

WE regret that Mr. G. Holt Thomas, one of the pioneers of civil aviation, died at Cimiez on January 1, 1929, after an operation. He was 59 years of age. In 1906 when Santos Dumont was making his first short trips at Bagatelle, Mr. Holt Thomas offered, through the medium of the *Graphic*, a prize of £1,000 for a mile flight. He helped to organise the Blackpool flying meeting, and at his invitation Louis Paulhan gave some demonstration flights at Brooklands. Mr. Holt Thomas provided the pilot and machine, and the profits were to be divided between himself and the Brooklands Company, but so many people preferred to watch the flights from outside the boundary that he received only £18 in return for his outlay of thousands of pounds. It was before the war that Mr. Holt Thomas became interested in a practical way in aviation, and he formed the Aircraft Manufacturing Co. to produce Maurice Farman machines at Merton. Later the company moved to Hendon. Capt. G. de Havilland joined Mr. Holt Thomas in 1914, and the technical qualifications of the former and the business qualities of the latter combined with great success. During the war Mr. Holt Thomas organised his company to produce machines on an enormous scale at Hendon, for which he employed about 8,000 people. The rate of production was at one time one machine every three-quarters of an hour. The various de Havilland types were the machines constructed then. These included the D.H.2, D.H.4 two seater; D.H.9 and D.H.9A.

Large works were also taken by Mr. Holt Thomas at Hythe, on Southampton Water, for the manufacture of flying boats. After the war he turned immediately to civil aviation, and organised the Air Travel and Transport Co., which ran the first cross-Channel air services in August, 1919. A D.H.4

converted military machine was used, carrying two passengers in an enclosed cabin. Later the Daimler Hire Co. took over from him, and then for some time three separate companies competed on the services with subsidies. Mr. Holt Thomas was a strong supporter of the subsequent amalgamation which led to Imperial Airways. After the control of his company A.M.C., then styled The Airco, passed to other hands, Mr. Holt Thomas became less active in aviation, although he always gave his support or influence to developments. The carrying of mails by air was strongly advocated by him, and so was the question of an air service to Australia, about which he spoke and wrote continually.

Capt. de Havilland formed the present De Havilland Aircraft Co., Ltd., with the generous support of Mr. Holt Thomas.

He became interested in the breeding of Friesian cattle afterwards, but he sold his stock some time ago. He was still to be seen, however, at important functions in the aviation community. He was the seventh son of Mr. W. L. Thomas, R.I., founder of the *Graphic* and *Daily Graphic*, and was born in 1869. He was educated privately and at Queen's College, Oxford. The *Bystander* was founded by him, and of that journal and the *Graphic* and *Daily Graphic* he was director and general manager until 1906. The *Empire Illustrated* was founded by him also in 1908, and carried on until the outbreak of war, with other publications to attract interest in British products for the British. An association of British motor manufacturers for demanding a duty on foreign cars was another of his creations. In 1894 Mr. Holt Thomas was married to Miss Gertrude Oliver, daughter of Mr. Thomas Holt, F.R.I.B.A.

Northampton Aerodrome

A PROPOSAL is to be submitted to the Northampton Town

Council to allot 100 acres for an aerodrome site at Hardingstone, near Northampton.

THE THADEN T-2

An American All-Metal Commercial Monoplane

ONE of several interesting new machines exhibited at the recent Los Angeles Aeronautical Exposition was the Thaden type T-2 all-metal monoplane constructed by the Thaden Metal Aircraft Co., of San Francisco. The Thaden T-2—which is the second type of machine produced by the company, the "Argonaut" T-1 being their first and larger model—is a three-four passenger full cantilever wing cabin monoplane powered with a "Comet" seven-cylinder air-cooled radial engine developing 150 h.p. at 1,800 r.p.m. Although similar in design to the "Argonaut," it differs mainly in having the full cantilever wing fitted with "flaps" on the trailing edge, which make it possible to vary the camber of the wing.

Duralumin is used almost entirely in its construction, and the fuselage is of the monocoque type. Multi-spar wing construction is employed in the plane producing an unusually rugged unit. The structure consists of five spars of the plate girder type, with corrugated duralumin sheathing which provides drag bracing for the wing. To speed up production on these units the company has developed several jigs of unusual design, including a large one for wing assembly.

placed on the tail without the slightest deformation. The fuselage has a true airfoil section which is said to contribute to the lift.

The Thaden T-2 is, we believe, the first American machine to utilise wing flaps to produce variable camber. These flaps are of triangular section, duralumin sheathed, and occupy all of the trailing edge except the portion where the ailerons are attached. They are actuated by a wheel and worm gear built into the lower portion of the wing structure just above and to the right of the pilot's seat. In extreme upper position they conform with the normal curve of the wing and permit of maximum speed. Downward deflection results in increased lift and any intermediate position can be held firmly because of the worm gear arrangement. The flaps represent approximately 9 per cent. of the total lifting surface and decrease the landing speed by approximately 9 m.p.h.

Ailerons and other control surfaces are similar in construction to the flaps and are actuated by horns and steel cables operating over micarta sheaves. The rudder is 10 per cent. balanced, the stabiliser is adjustable in flight and the



THE THADEN T. 2 : An American all-metal commercial monoplane having full cantilever wings with "variable camber" wing flaps.

Static tests on the completed wings have given proof of the sturdiness of this type of construction, and in one instance a load of 19,000 lb. was applied without any indication of failure, deformation of members or loosening of rivets. This load produced an extreme deflection of only 7 ins. at the wing tips.

With the exception of the leading edge of the wing, the window casings and a few tubular members, all parts of the plane's structure are of corrugated duralumin. A special die has been developed by the manufacturer to fair the corrugations into plane surfaces, producing an exceptionally smooth modulation and avoiding minor air turbulences set up by other types of transition plates. Duralumin plate fittings attached to the wing spars and to internal stiffening members of the fuselage are coupled by twelve $\frac{1}{2}$ -in. nickel steel bolts, producing an effective method of wing attachment.

The fuselage construction, which was first introduced in the "Argonaut," is as follows:—The engine mounting is of welded steel tubing, and is the only portion of the plane conforming to conventional practice. Shaped duralumin members extend from the rear of the engine mounting past all openings in the monocoque structure to the after end of the cabin. Aft that point, the internal bracing is entirely transverse, provided by duralumin tube bulkheads riveted to the skin. These are placed closer together toward the tail to strengthen the shell against landing shocks transmitted through the tail skid. Bulkheads are also provided at the front and rear of the cabin, the forward one being cut out to allow easy access to the pilot's seat.

This type of fuselage has proved to be very rigid both in flight and in landing, and in one test a 1-ton weight was

fin is adjustable on the ground. All control surfaces have been tested to 25 per cent. overload.

Ample height and full leg-room are afforded in the comfortable cabin which is furnished in automobile fashion, the pilot's section being lined with terne plate and the passenger compartment upholstered in mohair. Both are well insulated and the interior colour is steel gray throughout.

The length of the cabin, including pilot's compartment, is 8 ft., the width 3 ft. 4 ins., and the height 4 ft. Large, easily opened, plate-glass windows are provided on each side of the cabin. The forward end is almost entirely of glass, affording unusual visibility ahead, to the sides and below to a point inside and considerably to the rear of the wheels. A sliding glass panel over the pilot's seat provides visibility above and, while designed for an emergency exit, it is so conveniently located that it will probably be used by the pilot in preference to entering and leaving the plane through the cabin. The mounting on which this panel moves is such that the natural pressure of the air stream tends to hold the glass in place rather than to raise it.

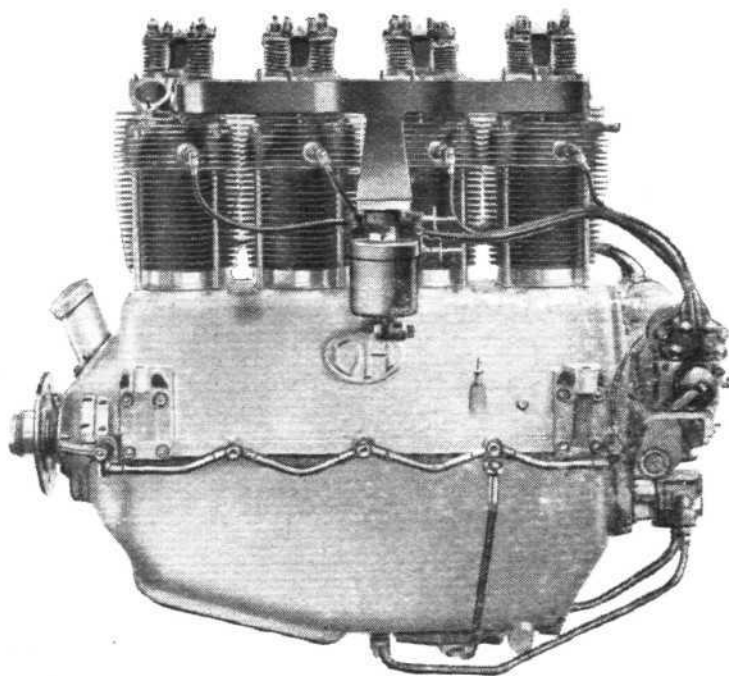
A wide and comfortable lounge seat extending the full width of the cabin and accommodating two persons is placed at the rear. In the forward part a bucket seat is provided for the pilot at one side and at the other side a folding seat is placed, and may be used when it is desired to carry an extra passenger or a relief pilot. A large luggage compartment is built into the fuselage structure behind the cabin.

Conventional stick and rudder pedals are employed in the control system, and in production planes a second socket and an additional set of pedals will be provided for instructional and other purposes. There is, however, only one control for the wing flaps.

IN RECOGNITION OF MERIT

THE Wright Aeronautical Corporation, makers of the famous "Whirlwind" engine, wished to produce an engine suitable for light aircraft.

It is highly significant that of all the many types available in the World, they have chosen the de Havilland "GIPSY." Arrangements have been made whereby the "GIPSY" engine will be manufactured in America under licence by the Wright Aeronautical Corporation. It will be called the "WRIGHT GIPSY."



THE 85/100 H.P. D.H.
GIPSY ENGINE

The House of de Havilland holds six of the seven International Records now standing to the credit of Great Britain, of which three were gained by the "GIPSY"—the only British light aero engine to hold World's Records.



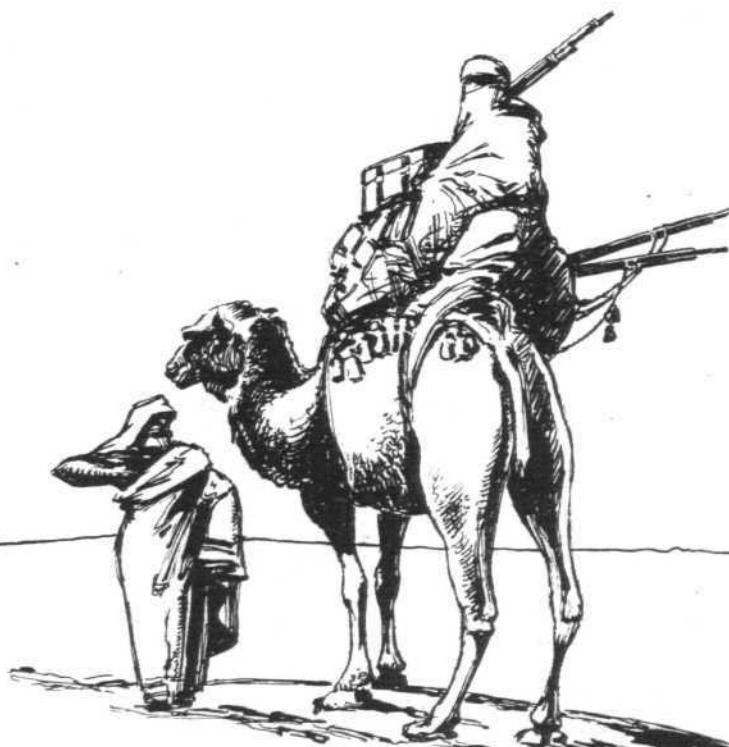
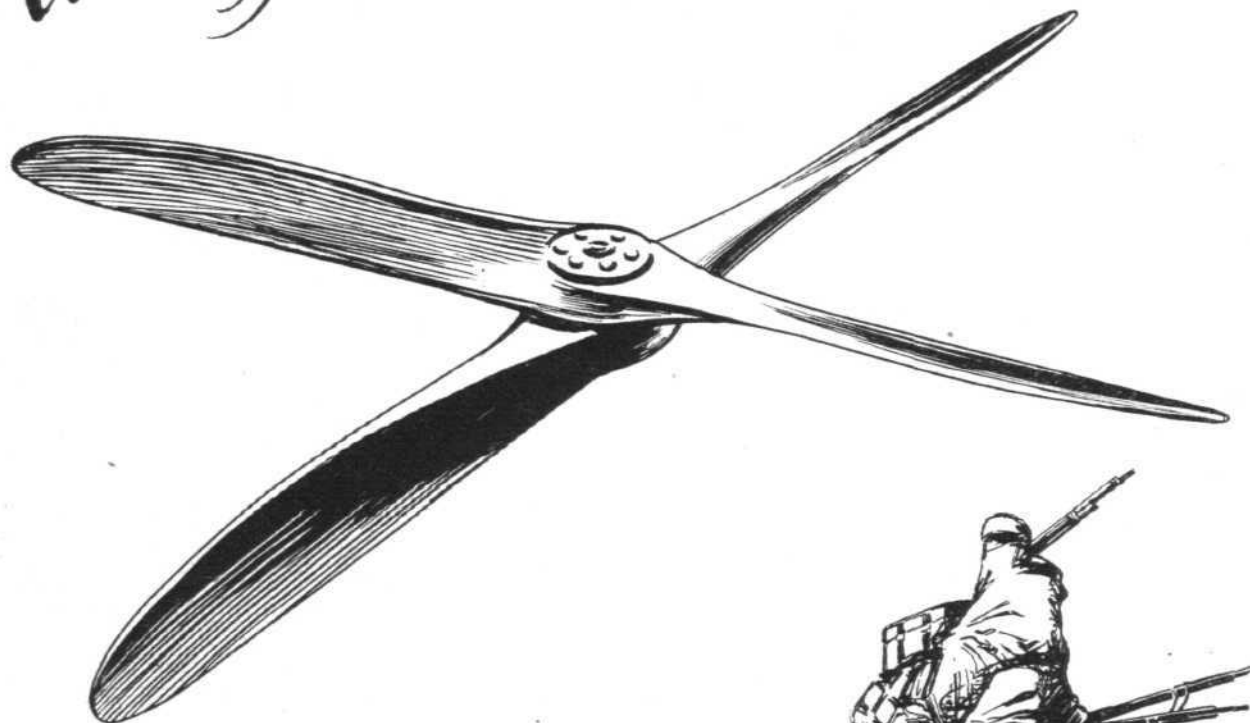
The House of Wright supplied the "Whirlwind" engines used by Col. Lindbergh on his New York—Paris flight: by Captain Wilkins — Alaska to Spitzbergen: by Mr. Stultz and Miss Earhart — Newfoundland to Wales, etc.



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The usual fireproof bulkhead is inserted between the cabin and engine compartments and the engine mounting is so designed as to afford easy access to the rear of the power plant when it is necessary to adjust or repair carburettor, magneto or starter. The exhaust ring is sunk into the cowl to reduce parasitic resistance, but an air channel is provided around it to prevent overheating. Fuel supply of 40 gallons is carried in the two wing tanks over the fuselage and accessible through cover plates. An emergency tank of 10 gallons capacity feeds directly to the carburettor eliminating the necessity of a forced landing if the fuel supply from the main tanks is stopped.

The landing gear is of the split-axle type, built up of heat-treated chrome molybdenum steel tubing with Gruss shock absorbers inserted in the compression members. Bendix wheels and brake units are used and the brake control is so adjusted that either or both brakes may be applied at will. A leaf steel spring is used to absorb tail skid landing shock. The landing gear, tail skid, door handles and control horns are the only members protruding beyond the outline of the 'plane, all other units being streamlined into the structure.

The specifications furnished by the manufacturer are as follow :—

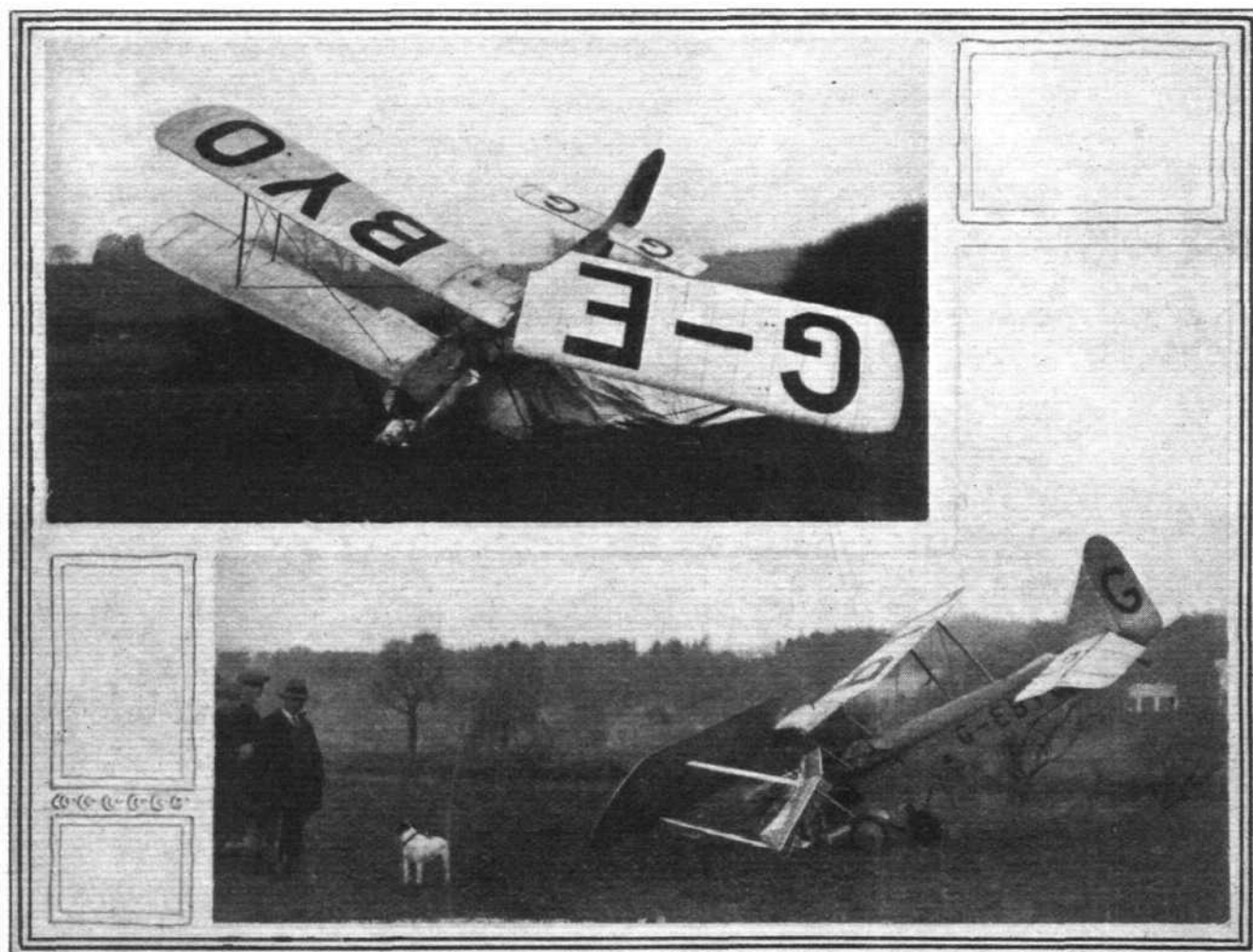
Span	39 ft.
Length o.a.	25 ft.
Height	7 ft. 9 in.
Chord (maximum)	8 ft.
Wing area (including flaps and ailerons)	226 sq. ft.
Flap area	21½ sq. ft.
Aileron area	19 sq. ft.
Elevator and stabiliser area	30½ sq. ft.
Rudder and fin area	11¼ sq. ft.
Power plant	150 h.p. "Comet."
Fuel capacity	50 galls.
Oil capacity	6 galls.
Speed, maximum	121 m.p.h.
Cruising	90 m.p.h.
Landing, flaps up	55 m.p.h.
Landing, flaps down	46 m.p.h.
Rate of climb, sea level	800 ft. per min.
Service ceiling	16,000 ft.

SMART SERVICE

THE private owner will rely at times upon skilled assistance during his tours whatever machine or engine he is flying, just as the motorist with the best car on the road cannot do without garages occasionally to avoid being stranded. At this stage in private flying the owner cannot expect help by air yet as a rule, but there are exceptions, of which we here give a topical instance. It should be remembered by any air tourists in the south-west of England for guidance in a similar emergency.

On Christmas Eve Flight-Lieut. Scholefield, test pilot to Vickers, Ltd., crashed in an Avro "Avian" at Whitchurch. The Agra Engineering Co., Ltd., of Teignmouth, Devon, who have an aerodrome at Haldon, Teignmouth,

were immediately asked to salve the machine by the British Aviation Insurance Group, and save it from further damage. On Christmas morning Flying Officer W. Parkhouse, the managing director, left Haldon aerodrome in his own Avro "Avian" with Mr. Lee, one of his pupils, and flew to Whitchurch, which is 6 miles east of Andover, in 1 hr. 5 mins. Flight-Lieut. Scholefield's machine was found to have crashed into the River Test and been hauled to the bank. It was dismantled and transported to Whitchurch, then Flying Officer Parkhouse flew back to Haldon in 1 hr. 45 mins., to resume his interrupted holiday in North Devon. This is an example of the prompt service given by the Agra Engineering Co., Ltd.



The Avro "Avian" light aeroplane salvaged from the River Test at Whitchurch after a crash during the Christmas holidays. It was taken charge of and dismantled at quick notice by the Agra Engineering Co., Ltd., of Teignmouth, the managing director of whom flew to the scene in another Avro "Avian"

EDDIES

It was inevitable that the project of the Channel Tunnel would be revived since aviation has come into its own. The one point with which the anti-tunnellists successfully clinched their arguments was always the bogie of invasion of England via this conduit pipe—in spite of all precautions for flooding from the British side so elaborately provided for. That eventuality has no longer any significance, relatively, as it is now universally recognised that England is not only no longer an island, but that with aircraft, she is probably, via the air, the most vulnerable power in the world for any really determined foe to attack at her heart centre. Therefore have the tunnellers a fair chance of at last seeing their pet scheme come into being—much to the relief of many *mal-demer* victims, and probably to the great benefit of British industrial interests.

ONE thought should be well to the fore in the calculations of the promoters in regard to revenue, and that is that travel by aircraft across the streak is likely to be quite a serious factor in the coming years, and likely to be well established long before the possibility of the opening of the tunnel.

In this connection, the following remark, attributed to Lady Cecil Bingham, one of the opponents of the scheme, is of significance. Lady Bingham said: "I hate being in the dark underground, and the idea of some time there appals me. Also I like the variety of the boat; one gets bored in a train. I would far sooner go by aeroplane than by the tunnel."

M. LAURENT EYNAC, the French Minister for Air, is a man of opinions, and has, for all the years he was connected with official French aviation, shown himself to be a broad-minded far-seeing enthusiast of the realm of the air which he has made his study, and now that he has been induced to again take charge of aviation the other side of the channel he has swept aside the foolish regulations hitherto in force that French machines only might be used by C.I.D.N.A. (and others) on their Paris-Bucharest air-line. As M. Eynac insists, there is nothing like gaining experience from comparison with their own machines side by side with other countries' productions. This may appear to be a reflection upon French construction, but better that than the nation should remain in an ostrich-like state of blissful ignorance.

"AND the Cow Jumped Over the Moon" has always appealed to one as a delightfully absurd impossibility (except, perhaps, when we were *very* young), yet, in these modern days of science, while the cow may not actually soar to such giddy heights, this feat may come a little nearer attainment! In other words, more than 1,500,000 cattle will contribute

to the making of each of the two 6,500,000 cub. ft. airships which will be built for the U.S. Navy by the Goodyear-Zeppelin Corporation of America. This contribution consists in the furnishing of "gold beater skin" for the gas bags of these airships. "Gold beater skin," it may be mentioned, is a small tough section of the intestine of a steer, possessing remarkable strength combined with lightness of texture and "gas-tight" qualities. Each skin is only from 15 to 30 ins. long by 6 or 8 ins. wide, hence the large number of cattle required for their little joy-ride towards the moon.

THE report that the Doncaster Town Council has notified the Air Ministry that they endorse the proposal to establish municipal aerodromes revives old memories of that go-ahead town. For it was as early as 1909 that Doncaster, in spite of the absence of official backing, organised one of the first Flying Meetings ever held in this country. This meeting opened on October 15 and continued—more or less successfully—until October 26, simultaneously with the Blackpool Meeting.

NATURALLY, the latter event, which was officially recognised by the Royal Aero Club, claimed the larger share of attention, and also pilots and machines—and goodness knows there were not many of either available in those days—but for all that, Doncaster managed to get together a handful of well-known pioneers. One of these was S. F. Cody with his flying "Bamboo Bungalow," and others that come to mind were Delagrange, Roger Sommer, Le Blon, and Molon.

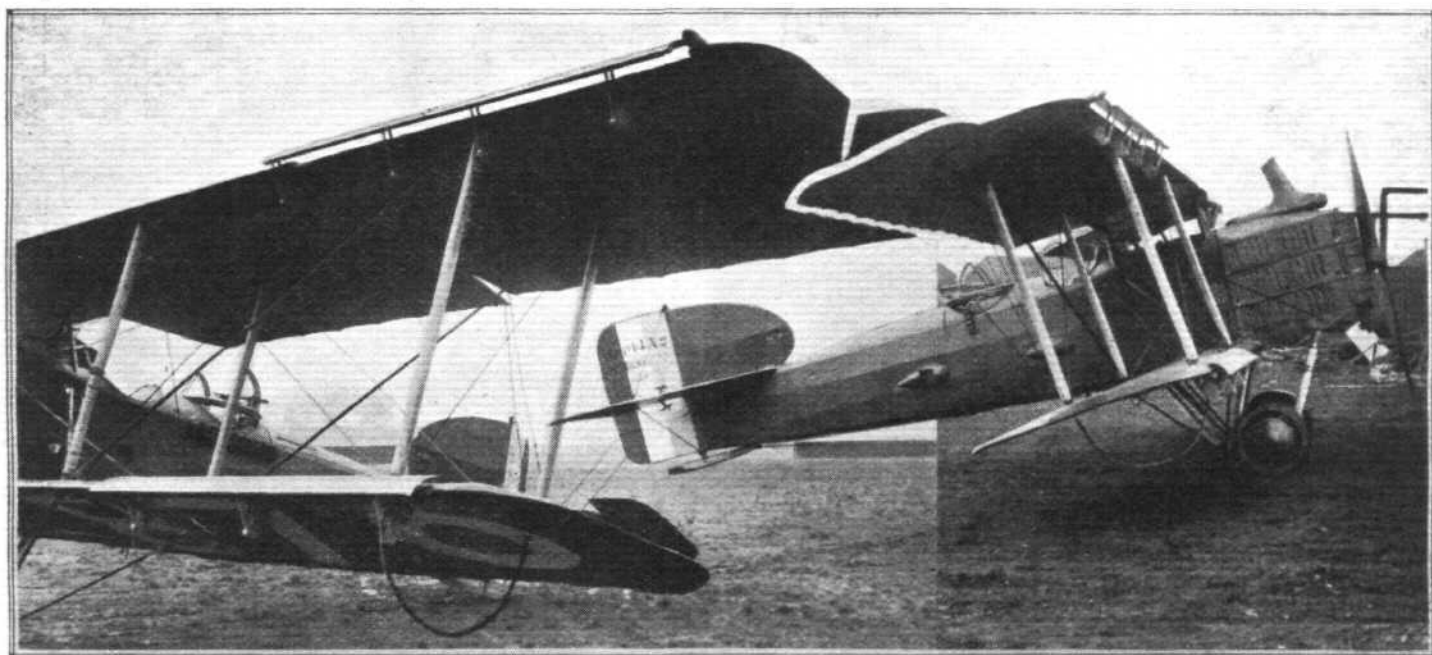
So you see, Doncaster was up to date even in those days.

It was interesting to watch a Handley Page air-liner land in the fog at Croydon on Monday. It could not be seen from the ground at all, and was not detected until, to everybody's surprise, it taxied in out of the fog whilst the warning bombs were still being fired. There was a small load of passengers, and, as usual, they included a lady.

WHAT hardy men our Imperial Airway pilots must be. They fly in open cockpits even in winter. The machine mentioned above is deeply scooped on the side of the cockpits, and there are no side windscreens, leaving an exceptionally exposed position, one would think.

I HEAR that the transfer of the Leeds branch of the Blackburn Aeroplane Company to their Brough works and aerodrome is well forward now. The little village of Brough and the surrounding rural districts must welcome this move, and Leeds, of course, must regret it.

AEOLUS



["FLIGHT" Photographs]

NEW WINE IN OLD BOTTLES: A Breguet type 14 A.2 has recently been fitted at Cricklewood with Handley Page automatic wing tip slots. We do not know what Mr. Cordes thought of testing the machine, but the photographs show that there are plenty of other cords (à piano) on board to help in the work.

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The Armstrong Siddeley 450-500 h.p. 14-cylinder Geared Jaguar for Civil or Service requirements. Jaguar engines have been in service on the London Paris Airway for over three years.

The Super-charged 14-cylinder Jaguar is specially designed for maintaining power at high altitude.

Note.—The Armstrong Siddeley Geared Centrifugal Supercharger was the first device of its kind supplied to the Services and has now been in use for three years.

THE LYNX

The Armstrong Siddeley 215-225 h.p. 7-cylinder Lynx as used on the Amsterdam-Batavia, Munich-Milan and other airways.

THE MONGOOSE

The Armstrong Siddeley 130-140 h.p. 5-cylinder Mongoose engine for training work on land or sea.

THE GENET

The Armstrong Siddeley 80-88 h.p. 5-cylinder Genet, an engine which is very much lighter than any engine in its class and is, therefore, particularly suitable for powering light aircraft.

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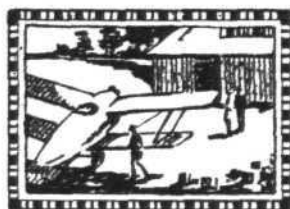
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constructors and pioneers of all-steel aircraft, employ over 1,000 workpeople at Whitley, near Coventry. Here were designed and built the Imperial Airways' Argosies, the steel Siskins, Atlas and A.W.A. 14's for the Royal Air Force, and here, too, is a school for training pilots under the R.A.F. Reserve Scheme.

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LADY BAILEY'S RECORD SOLO FLIGHT

18,000 Miles on a "Cirrus-Moth"

THE first light aeroplane flight round the African continent has been successfully completed by the Hon. Lady Bailey, in her "Cirrus-Moth." She is expected at Croydon Aerodrome as we go to Press, having flown nearly 18,000 miles since the beginning of last March, on the usual route through Cairo to Cape Town but back on a deviating route along the west side of Africa which no light aeroplane had flown over before. This is the longest solo light aeroplane flight.

Lady Bailey left Croydon on March 9, 1928. In her machine, fitted with the A.D.C. "Cirrus, Mk II," an extra petrol tank had been installed in the front cockpit. This made possible non-stop flights of 10 hours. Only two small suitcases comprised her personal luggage. The first landing after leaving Croydon was at Sacy le Petit (Oise) owing to fog. Paris was reached the following day. Immediate progress was then checked by snowfalls, but after getting away, Lady Bailey arrived at Lyons, March 11, having encountered a little difficulty with a faulty compass. In face of a strong mistral Marseille was made on March 12. On her departure the same day for Pisa and Rome, at noon, a number of pilots gave her an aerial farewell. Then came Naples, March 13, and Catania on March 14, and after a stage of 115 miles on March 15, Lady Bailey descended at Malta. The sea trip across to the North African coast was flown on March 16, the landing being effected at Homs. There, after refuelling, she flew to Tripoli. On March 18 Aboukir was reached, and Cairo two days later.

When arrangements for an escort by Lieut. Bentley were decided, Lady Bailey went on to Luxor on March 27, Aswan March 29, and later to Wady Halfa through a sandstorm and in intense heat. That storm blotted out the ground, and thus left no choice had an emergency landing been necessary. The stage took 125 minutes. On March 31 came Atbara and Khartoum on April 2. There Lieut. Bentley

joined her for the continuation on April 5, and provided an escort as far as Nimule.

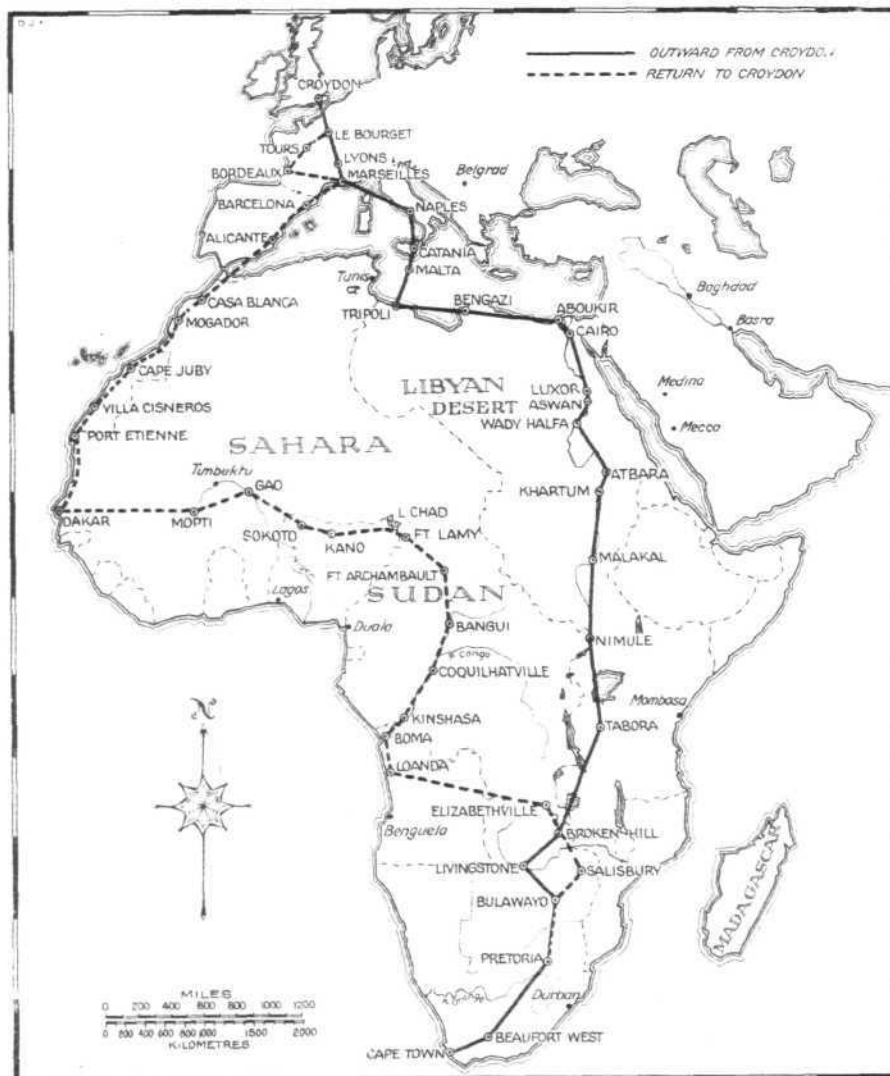
With so much of the 8,000-mile outward flight successfully achieved, Lady Bailey had the misfortune to crash at Tabora on April 8. It was stated that she had no map of the Kisumu-Tabora stage, and flew to Nzega but found no possible landing ground. Turning back to Shimyanga, she landed there to inquire her way and then flew on to Tabora. This delay caused the arrival at the latter place during the

hottest part of the day, when the air was very bumpy. The aerodrome there is 4,000 ft. above sea level. Lady Bailey thought she took insufficient notice of these conditions. Her landing was heavy and the machine turned over, breaking the fuselage and a spar. The engine and petrol tanks were saved. It seems that an approach to the aerodrome on the west side would have been easier if a gap had been cut in a row of trees. Another D.H. "Moth" became at Lady Bailey's service in a short time through the D.H. "Moth" agent in S. Africa, Mr. J. H. Veasey. It was flown from Roberts Heights to Tabora by Maj. Meintjes. About April 20 the flight was continued to Broken Hill, and, four days later, in spite of an attack of influenza, she got to Livingstone. A strong wind troubled the next stage to Bulawayo on April 25. Nine machines gave an escort on the arrival at Pretoria on April 27.

Just after noon, April 30, the 8,000-mile lone outward flight was completed at Cape Town, later than anticipated. Baffling winds and cloud had impeded the final stage from Beaufort West. Two machines went up to escort the D.H. "Moth," but failed to sight it in the clouds. Sir Abe Bailey was the first to greet his wife. The Mayor was present also, as well as many representatives of the local club.

Return Flight

This résumé of the return flight is approximate. Many



Our sketch map traces the course from England, across France, and round the African continent flown by the Hon. Lady Bailey alone in her Cirrus-Moth between March, 1928, and January, 1929. About 18,000 miles were covered altogether

deviations were made. Lady Bailey asked the sanction of the Sudan authorities for a solo flight over the Sudan territory on the homeward course, but it was not given, so the west coast route was chosen. On September 21 she was flying the Pretoria-Bulawayo stage, and went on to Salisbury the next day. Then came Broken Hill. Permission was granted her by the Belgian authorities to fly over the Katanga Province in Belgian Congo, and thus a landing was made at Elizabethville in that province on September 24. She was next recorded having flown from Leopoldville (Kinshasha) to Loanda in Angola on October 5. Slight repairs were necessary there, and the visit coincided with that of the Portuguese airmen, Capt. Pais de Ramos and Oliveira Viegas, who flew to Mozambique from Lisbon in Vickers "Valparaiso" machines fitted with Napier "Lion" engines. Both flights aroused great interest in that town.

Lady Bailey resumed on October 19, and reached Boma in the Belgian Congo from Loanda. On November 23 the arrival at Kano in Nigeria, was reported, which was then left on November 27 for Sokoto via Zaria. Mr. Carpenter, a Nigerian pilot, was an escort in a light aeroplane. The next day Gao, on the River Niger in French West Africa, was reached, and Lady Bailey then asked for permission of the Compagnie Generale Trans-Saharienne to fly the Sahara and give assistance in the provision of fuel depôts across the desert. This request was politely refused owing to the disturbed conditions in the country, and after a fortnight's stay at Gao Lady Bailey continued, having been advised to fly to Dakar, and thence to Casablanca, a route where official facilities would be found. Mopti, higher up the Niger, was the next stage, and then came Dakar, and Port Etienne on December 21. One day later the Cirrus-Moth landed at Villa Cisneiros, in the Rio Oro, Spanish Sahara.

Came Mogador on December 27. A safe landing was effected at Casablanca in Morocco on December 30 at 2.50 p.m. Starting for Malaga two days later she was obliged to return owing to bad weather, and the flight was resumed on January 1. A landing was made at the Latécoère Company's aerodrome at Alicante, Spain, on January 3, and the flight was continued in the afternoon to Barcelona.

The intended course then was via Lyons to Paris, but she was advised to avoid the Rhone Valley and the central plateau, which at this season would be covered with cloud and fog. So a course to Bordeaux was set. On January 6 she left the latter place and flew to Tours, where the local authorities expected her to land, not realising that the machine had an extra petrol tank. They were therefore surprised to see her pass on. The weather was very bad when she arrived over Paris, and it was impossible to find Le Bourget. Finally a landing was made at Villacoublay, where a delay occurred owing to fog.

In speaking to the Paris correspondent of the *Times*, Lady Bailey said:—

"My route was from Pretoria to Bulawayo, Broken Hill, Elizabethville, Kano, Bamako, and Dakar. But I didn't fly straight through; I spent some time 'touring' to places I wanted to see—I got what I wanted everywhere, and everybody was most kind and helpful. I flew over British, French, Belgian, Portuguese, and Spanish country. They aren't all equally developed, but they're all going ahead, the Belgians especially. They have their chain of aerodromes across the Congo complete, and they have emergency aerodromes between them, too, properly marked. They're using British machines—three-engined Handley Pages.

"The Portuguese country is less developed, but quite possible for flying. The French are doing well in the north, though they haven't pushed down south yet; but the Aero-postale Line is well organised as far as Dakar. The trouble in Spanish territory is that they haven't got rid of raiders. Part of the Congo is difficult flying country—forests—but that, again, is not impassable. The whole country is being opened up for air travel. In a few months it will be easy for any amateur like myself to fly across West

Central Africa. By next summer the route will be well developed."

Lady Bailey is very anxious that British enterprise should take a hand in the great development that she saw in Africa. "The thing is going ahead," she said, "and we are being left out of it." Yet British machines are used. Not only the Belgians are using them. Everywhere there are opportunities; the country is waiting for the boon of rapid transport. "Why," Lady Bailey exclaimed, "in some parts of the Congo they have to wait a year for the goods they order! Think what aviation means to them!"

An Appreciation

THE following appreciation of Lady Bailey was written by the Editor of the *African World* for December 29:—

"The arrival of the Hon. Lady Bailey in her 'Moth,' at Mogador, Southern Morocco, on December 27, where she was received by H.M. Consul, is bringing us very near to the conclusion of one of the most gallant, if not daring achievements ever recorded in African aviation. Here we have a woman, alone and unaided in any way, calmly concluding an aerial trans-Continental survey covering Africa to the minimum extent of 14,000 or 15,000 miles flying in a small Moth machine. The outward route via the Nile Valley, Uganda, Tanganyika, Rhodesia, and the Union had one interruption, by the machine being damaged at Tabora and having to be replaced by another, thanks to the good offices of the Air Force Department of the Union Government. The classic arrival at Cape Town last autumn, with the unconventional greeting to her anxious husband, 'How are you, Abe? I'm a bit late,' will rank amongst the best-remembered episodes of the courageous and great effort.

"The homeward flight—unequalled in several sections by anyone else, not even by a modest male flyer—will stand as a wonderful record, especially from Elizabethville and Loanda northwards. Skirting the Congo Belge via Boma, Leopoldville—Kinshasha, and Coquilhatville, she passed north over the dense tropical Equatorial jungles of the French Congo via Bangui into the French Sudan via Fort Archambault, Fort Lamey to Lake Tchad.

"A brief aerial hop was made into Northern Nigeria at Kano and Sokoto, thence again into French territory via Zinder and Nyamey to Gao, 150 miles west of Timbuctoo. Here permission was sought, and, we think wisely, not granted by the French authorities, who were otherwise only too willing to assist and facilitate everything possible in their power for the gallant little English lady, whose famous husband won the Croix-de-Guerre in the Great War.

"Realising, at Gao, that it was hopeless to remain there longer than a fortnight, Lady Bailey carried out the boldest part of her great task, flying to Mopti, 300 miles west of Timbuctoo, the capital of French Sahara Province. She was advised to make for Dakar, on the west Coast, but apparently took her own view, and then made a daring long flight at least 1,500 km. across the French Senegal, reporting herself on December 21 at Port Etienne, near Cape Blanco at the extreme northern frontier of French Mauretania, and on the southern boundary of the Spanish Sahara Colony, known as Rio Oro.

"This was on the 21st inst. One day later we received a radio from Lady Bailey from Villa Cisneiros (still in Rio Oro), and two days later she reported herself at Cape Juby, opposite the Canary Islands, still within Spanish territory, where she was met and escorted by the Governor's wife as her guest. Villa Cisneiros and Cape Juby are stated to be regular meeting stations for the French and Spanish Government aerial routes from Morocco and Cadiz. When Lady Bailey was at Mogador, she met Capt. Rattray, of the Gold Coast Service, flying southwards. Very little has so far appeared in print about this truly wonderful journey, of which we may sincerely hope that all details will be given in due course by the intrepid and capable pilot, whose claim to the great honour conferred upon her by France as Champion Airwoman of the World has once more been so transcendently and fully proved."

International Aircraft Exhibition

THE rules and regulations for the International Aircraft Exhibition to be held in London from July 16 to 27 next are now available and can be obtained together with the necessary application forms for space from the Exhibition Manager, 83, Pall Mall, London, S.W.1.

Doncaster's Air Port

AT a recent meeting of the Doncaster Town Council it was decided to inform the Air Ministry that they endorsed

the proposal to establish municipal aerodromes, and are adapting land for an air port for Doncaster.

Manchester's Aerodrome

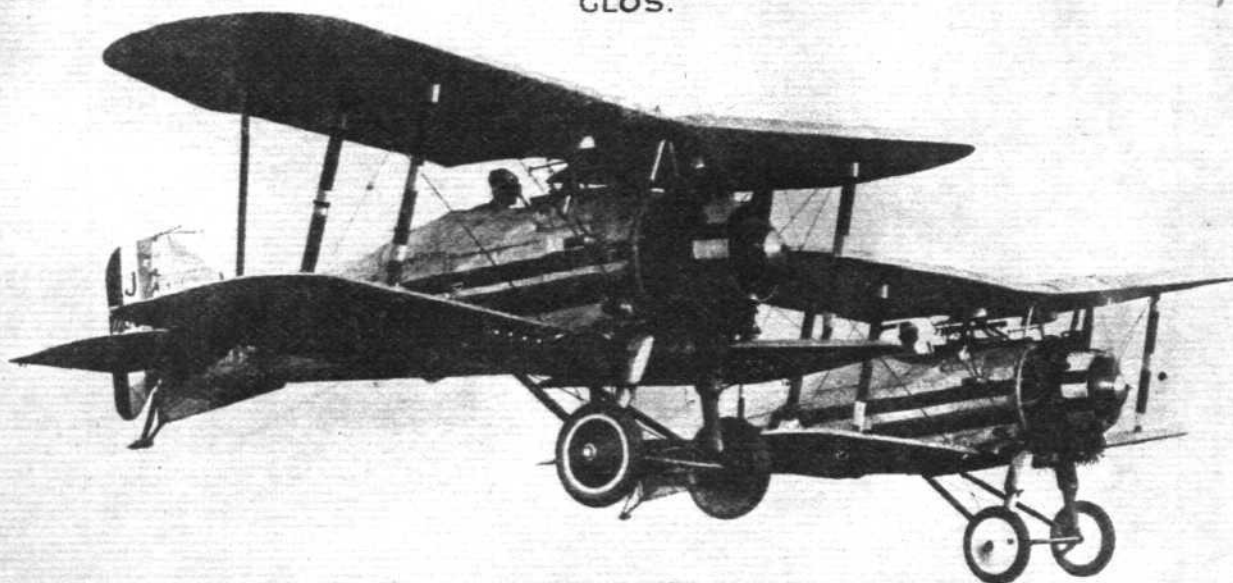
THE estimate for the laying out of the aerodrome at Chat Moss at Manchester has been considered. Apparently it will provide for two concrete slipways, each 100 ft. wide and 200 ft. long. A company is ready to take on actual flying services. The immediate employment of about 250 men for maintenance is mentioned.

GLOSTER

AIRCRAFT CO. LTD.



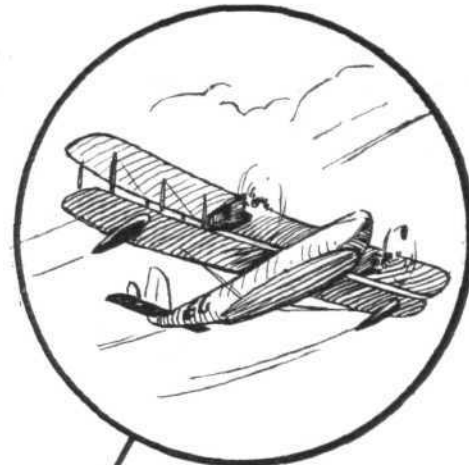
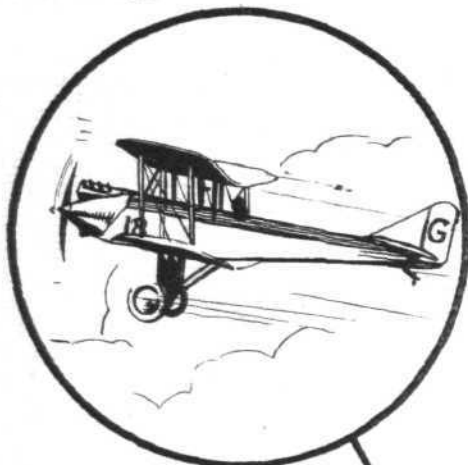
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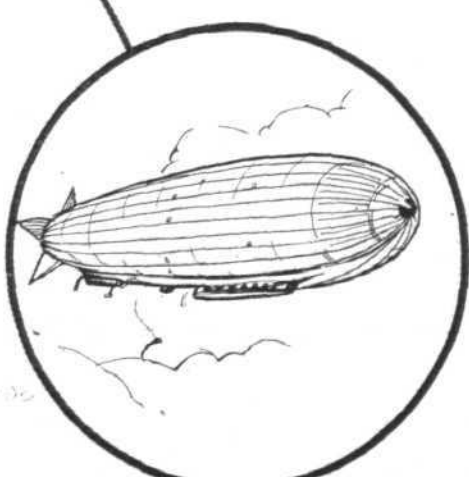
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LONDON TO BERLIN NON-STOP

By COLONEL L. A. STRANGE, D.S.O., M.C., D.F.C.

At Croydon Aerodrome, October 24, 06.30, a high southerly wind was blowing, which reached almost gale force with gusts of hard rain storms, when the "Spartan" was being run up on the tarmac. Mr. H. W. R. Banting, late 58 Squadron, and myself, late No. 5 Squadron, soon packed our suit cases (an extra 56 lbs.) into the luggage locker, and off we went, hoping to reach Berlin non-stop in about six hours. With 48 gallons of petrol we estimated to have at least 18 gallons reserve, or $3\frac{1}{2}$ to 4 extra flying hours in case of bad head wind.

The take-off was extremely good, except for a very soft spot just off the tarmac which pulled us up a bit and put our "tail well up." This came down again when we met the down draught from the hills and trees in the south-west corner of the aerodrome. A few minutes later we were well up and just under the clouds at 800 ft. Lympe was reached in fairly good time, in spite of the cross winds and hard rain.

The "Spartan" with her heavy load, was flying perfectly, with the "Cirrus," Mark III, well throttled back to 1,800. Our compass crossing to Calais, allowing for the southerly wind, was only a few points off due south, and the crossing took about 20 mins. In view of the low visibility and clouds, this bit of our trip was only pleasant to reflect upon when

frontier at Oldenzaal it became necessary to stick right on the railway to Bentheim. Our altimeter showing minus 100 ft. from Croydon aerodrome, and there being nothing to see between the clouds and house-tops, it occurred to us that a canal, perhaps, would be less likely to have entered a tunnel suddenly than the railway.

As our interest in the countryside would have been interfered with by the pleasant pastime of cloud flying, we turned back and bore north into more low-lying country, and soon got back on to the Amsterdam-Hanover air route. Our course now being due E, took us N. of Rheine and Osnabruck, where the weather began to clear and improve rapidly, until at Minden, somewhere about 10.30 we were flying at 3,000 ft. in beautiful weather, with a grand view of the Hartz mountains ahead to the S.E., and busy towns of Buckebg and Schaumg beneath us, the big Steinhuder Meer with its island that looks like a boat in the middle down on our left, and the Ems-Weser Kanal stretching in a blue ribbon from one horizon to the other.

This is good flying country, with the names of towns plainly written on the aerodromes, and smoke fires in the circle, and other things comforting to a pilot's eye, and by the increasing number of machines passed and seen, aviation



Lieut.-Col. L. A. Strange, D.S.O., M.C., D.F.C. (right) and Mr. H. W. R. Banting, at the Tempelhof aerodrome, Berlin, with the Cirrus-Spartan in which they flew non-stop from London in 7 hrs. 10 mins. and back in 6 hrs.

comparing it with the far more unpleasant experience of those people who seemed to prefer the high seas.

Our course then lay up the coast to Bray Dunes, the point where aircraft must pass the Franco-Belgian frontier on this route. With the wind helping rather than otherwise, we made very good time to Ostend, but with the clouds getting very much lower, about 200 ft.

This height enabled us to watch very clearly our friends the Belgians just waking up and taking their morning milk bottles from the doorstep. A little later, when we began to bear eastward, the business people in Bruges were off to their work. And then Holland, the lowest-lying country in the world, the land of windmills and canals. Strips of tulip bed and black and white cows. Banting described this country as "unprintable" from 100 ft., but to me it was of vast interest in noting the method of the production of bulbs, the growing of what appeared to be willows in very narrow strips for miles on end in wet-looking country, and the particular care and selection of the small herds of black and white Friesian cattle and the various methods of agriculture.

I also noted that most of the small farms possessed a large brown dog, which appeared to greet us, either joyfully or as a noisy intruder on his slumbers. By 09.30 most of the high ground was beginning to connect with the clouds, and so on at 100 ft. past Hertogenbosch, Nijmegen on our left, Arnhem on our right, then Zutphen, until on reaching the German

seemed, indeed, to be taken seriously round about Hanover, which we were over about 11.00. Then came large tracts of forest country. Hereabouts the farmers seemed to be particularly efficient. Their corn stacks being beautifully thatched and in line, their cattle well cared for, indeed, agriculture appeared to be in a far better state than here at home. On we go over most interesting countryside and many large forests; across the Elbe running down past Magdeburg, we were soon close to Berlin, over the lake country, with Potsdam just down on our right, and "Berlin" in large white lettering showing up plainly on the Tempelhof aerodrome.

This appeared to be almost in the middle of Berlin, and looked about a mile long and nearly as wide, with lines of large hangars, and dozens of machines on the vast stretches of tarmac. As we landed, just down on our left, were the flags and bunting showing us the position of the Internationale Luftfahrt Ausstellung I.L.A. (Aero Show). I will not endeavour to describe the Show, as you have already read of this in various aeronautical papers some time since, but of our short stay in Berlin my impressions and recollections are extremely pleasant. Particularly do I remember Kaupman Bolle, whom we met on the ground for the first time at a delightful little party arranged by Group-Captain Christie, C.M.G., our previous acquaintance having been solely in the air, particularly during the summer of 1918.

Many recollections of war days and special nasty moments on both sides were brought to mind, Bolle being particularly interested to know the name of the pilot in No. 4 A.F.C., who used to counter-act his flat right-hand turn in his Fokker D.7, when out-climbed and attacked by the Snipe, by turning and shooting at him all the way down on his back. As Bolle said, "No doubt it is time I went home, but I must remember I am commanding Boelke's old squadron," and hardly appreciated my remark that "Old King Cole was a merry old soul."

We found all the organisation on the Templehof aerodrome extremely efficient, and police especially, very helpful. We met and talked to pilots of the Deutsche Luft Hansa and K.L.M. air lines, flying Junkers and Fokkers on various routes such as Berlin to Moscow, Vienna, Hamburg, Copenhagen, Zurich, Cologne, Amsterdam and London, and we formed the conclusion that the German commercial air travel service is extremely efficient. When these machines kept coming in after dark and leaving, a blaze of light themselves, the aerodrome lighted almost like day, and lighthouses

along all main routes, and names of towns lit up, it made one feel that we ourselves are a bit behind the times.

Of the journey home there is little to be said, as we came back on the same course, with, if anything, a slightly following wind, and a fairly heavy rain area of about 100 miles, in Holland again. In spite of the German Met. authorities' assurance that the weather in England was as bad as could be, the weather was clear over the Channel and between Ostend and Dover we passed five air liners. We arrived at Croydon just 6 hours after leaving Berlin, had lunch at the aerodrome hotel, and then went to Reading to tea, and home again just before dusk. The "Spartan" cum Cirrus, Mark III, had justified our expectations. It had enough petrol left for another good 300 or 400 miles at the end of the trip, which proved, as we had hoped, that the modern light aeroplane of this type has a range, for two people and $\frac{1}{2}$ cwt. of luggage, of at least 1,000 miles non-stop. As to expense, our bill for fuel and oil worked out at just over one halfpenny per passenger mile. Statisticians give the cost of shoe leather as one penny per mile, so flying is twice as cheap as walking.

LIGHT 'PLANE CLUBS

London Aeroplane Club, Stag Lane, Edgware. Sec., H. E. Perrin, 3, Clifford Street, London, W.1.
Bristol and Wessex Aeroplane Club, Filton, Gloucester. Secretary, Major G. S. Cooper, Filton Aerodrome, Patchway.
Cinque Ports Flying Club, Lympne, Hythe. Hon. Secretary, R. Dallas Brett, 114, High Street, Hythe, Kent.
Hampshire Aero Club, Hamble, Southampton. Secretary, H. J. Harrington, Hamble, Southampton.
Lancashire Aero Club, Woodford, Lancs. Secretary, F.W. Atherton, Woodford Aerodrome, Cheshire.
Liverpool and District Aero Club, Hooton, Cheshire. Hon. Secretary, Capt. Ellis, Hooton Aerodrome.
Midland Aero Club, Castle Bromwich, Birmingham. Secretary, Major Gilbert Dennison, 22, Villa Road, Handsworth, Birmingham.

Newcastle-on-Tyne Aero Club, Cramlington, Northumberland. Secretary, J. T. Dodds, Cramlington Aerodrome, Northumberland.
Norfolk and Norwich Aero Club, Mousehold, Norwich. Secretary, G. McEwen, The Aerodrome, Mousehold, Norwich.
Nottingham Aero Club, Hucknall, Nottingham. Hon. Secretary, Cecil R. Sands, A.C.A., Imperial Buildings, Victoria St., Nottingham.
The Scottish Flying Club, 101, St. Vincent Street, Glasgow. Secretary, Harry W. Smith.
Southern Aero Club, Shoreham, Sussex. Secretary, C. A. Boucher, Shoreham Aerodrome, Sussex.
Suffolk Aeroplane Club, Ipswich. Secretary, Maj. P. L. Holmes, The Aerodrome, Hadleigh, Suffolk.
Yorkshire Aeroplane Club, Sherburn-in-Elmet, Yorks. Secretary, Lieut.-Col. Walker, The Aerodrome, Sherburn-in-Elmet.

LONDON AEROPLANE CLUB

REPORT for week ending January 6, 1929.—Instructors: Captain V. H. Baker, M.C., A.F.C., Captain F. R. Matthews. Ground Engineer: C. Humphreys.

The following machines were in commission during the week: G-EBMP; G-EBMF; G-EBXS; G-AABL. Total flying time for the week: 23 hrs. 20 mins. Dual instruction: 18 members received dual instruction during the week, the time being 17 hrs. 45 mins. Solo flying: 10 members flew solo during the week, the time being 5 hrs. 35 mins.

Flying during the week was greatly interfered with by fog.

Christmas Raffle: Practically all the tickets for the Christmas raffle of the D.H. Moth Cirrus Mark I have been disposed of, and the draw will be made at the Clubhouse at Stag Lane on Sunday the 20th.

Clubhouse—Stag Lane: The Club rooms at Stag Lane, although not completely furnished, were open to the members on Saturday last, and the hot and cold luncheons served during the week-end were greatly appreciated. The furnishing will, it is hoped, be completed during the present week. Members are informed that hot and cold luncheons will be served daily.

Mr. M. P. S. Spencer, the Assistant Secretary, commenced his duties on January 1.

December flying return: The bad weather and the closing down of the club for the Christmas holidays, accounts for the somewhat reduced flying during the month of December. Total flying time, 52 hrs. 20 mins.

Dual instruction: 54 flights, 19 hrs. 45 mins. Solo flying: 57 flights, 24 hrs. 20 mins. Passenger flights: 8 flights; 2 hrs. 35 mins. Tests: 34 flights; 5 hrs 40 mins. Total: 153 flights.

BRISTOL & WESSEX AEROPLANE CLUB, LTD.

REPORT for the week ending Saturday, January 5, 1929. Pilot instructor for the week: E. B. W. Bartlett. Ground engineer for the week: A. W. Webb. Machines in commission (2) G-EBYH, G-EBTV. Flying time for the week (five days): 10 hrs. 23 mins. Pupils under instruction and hours flown (6): 5 hrs. 50 mins. No. of "A" pilots flying and hours flown (5): 3 hrs. 50 mins. Number of test flights and hours flown (8), 45 mins.

We reopened on January 1, after eight days holiday for Christmas. Although flying has been possible each day of the week, it has been bitterly cold and snow has now started to fall. Miss D. M. C. Luby made her first flight this week. Mr. Bunning defied the cold in a flight to Northampton and back, but otherwise flights have been short. Prospects for 1929 are bright.

CINQUE PORTS FLYING CLUB

REPORT for week ending Saturday, December 22, 1928. Pilot instructor: Maj. H. G. Travers, D.S.C. Ground Engineer: Mr. R. H. Wynne. Machines: NN and RI (de H. Moths). Total flying time for the week: 5 hrs. 10 mins. Dual instruction: Mr. Douglas, 15 mins; Mr. Somerset, 45 mins; Mr. Parks, 30 mins. Total, 3 members, 1 hr. 30 mins. Soloist (under instruction), Mr. Somerset, 15 mins. "A" Pilots: Mr. Douglas, 1 hr.; F.O. Tomkins: 10 mins. Total, 2 members, 1 hr. 10 mins. Special journeys, joyrides and tests: 2 hrs. 15 mins.

On Sunday, December 16, Major Travers flew our new "X" type Moth G-EBRI (formerly the property of the Duchess of Bedford) from Stag Lane to Lympne, with Mr. Twaites as passenger. The weather was exceedingly bumpy and a considerable detour had to be made to avoid fog patches.

On Wednesday, December 19, Major Travers, in RI, accompanied by Mr. Douglas in NN, flew to Canterbury to pick up Mr. Somerset from the Guards' depot there, landing in a convenient field for the purpose.

Weather stopped Club flying on two days in this week.

REPORT for week ending Saturday, December 29, 1928.—Machines: D.H. Moths NN and RI. Total flying time for week, 8 hrs. 20 mins. Dual instruction: Mr. Clemetson, 30 mins.; Mr. Somerset, 15 mins.; Mr. A. Payn, 15 mins.; total, 3 members, 1 hr. Soloists under instruction:

Mr. Worsell, 1 hr. 15 mins.; Mr. Somerset, 2 hrs. 15 mins.; total, 2 members 3 hrs. 30 mins. "A" Pilots: Mr. Douglas, 45 mins.; Mr. Somerset, 30 mins.; Flying-Officer Tomkins, 30 mins.; Mr. Mackinnon, 45 mins.; total, 4 members, 2 hrs. 30 mins. Joy-rides and Tests, 1 hr. 10 mins.

Weather stopped flying on Monday and Wednesday of this week, and the club was closed on Christmas Day.

On Sunday, December 23, 1928, Mr. E. T. Worsell, of West Malling, successfully passed his tests of "A" licence on NN, and he was followed on Thursday, December 27, 1928, by Mr. Somerset of the Guards' Depot, Canterbury, who passed in good style on RI after an exceptionally short period of instruction. The club congratulates both members on excellent performances.

The club bar in the club room inside the hangar was opened during this week, and was much appreciated by the members who were able to obtain some central heating to supplement the weird and wonderful clothing adopted to cope with the Arctic conditions which prevailed.

REPORT for week ending Saturday, January 5, 1929.—Machines: D.H. Moths NN and RI. Total flying time for week: 1 hr. 55 mins. Dual instruction: Mr. A. Payn, 15 mins.; Mr. Parks, 15 mins.; total, 2 members 30 mins. "A" pilots: Mr. Worsell, 45 mins.; Mr. A. Payn, 15 mins. total, 2 members, 1 hr. Tests: 25 mins.

The club was closed to give the staff a holiday on Tuesday, Wednesday and Thursday of this week, and bitterly cold weather accounts for the small flying time on the remaining days.

Mr. Douglas has purchased a De Havilland 53 single-seater monoplane with Blackburn "Tomtit" engine G-EBXM, and this was delivered by air during the week. The machine has created great interest, and much jealousy amongst the members. Mr. Douglas has not flown it as yet, as he is prudently waiting for weather more suitable to such a light craft than the succession of blizzards which have been served out this week.

HAMPSHIRE AEROPLANE CLUB

REPORT for December 29, 1928.—Pilot instructors: Flight-Lieut. F. A. Swoffer, M.B.E., and Mr. W. H. Dudley. Ground engineers: Mr. E. Lenny and Mr. J. Elliott. Aircraft: D.H. 60, Moths G-EBOI and G-EBOH, and Avro Avian G-EBVI. Flying time for the week, 11 hrs. 25 mins. Pupils under instruction, (9), 5 hrs. Soloists, (1), 1 hr. 20 mins. "A" pilots (6), 4 hrs. 15 mins. Tests, (9), 50 mins.

Total flying time for 1928, 1,568 hrs. 15 mins.; total flights, 4,548.

	Hrs.	Mins.	Flights.
Dual instruction	720	5	1,843
Solo flying	207	5	600
"A" pilots	403	5	974
Instructors' Tests	65	30	495
Passengers	172	30	636

In 1928 the club made considerable progress. During 1927 the number of hours flown was 700, and this was more than doubled last year.

In January last it was found necessary to increase our flying stock of two Moths and an Avro Avian was obtained.

Membership now amounts to over 400, including 230 pilot members. There are 63 "A" and "B" licence pilots on the books and 26 *ab initio* pupils obtained their "A" licences during the year.

There have been many changes in the staff. Flight-Lieut. G. I. Thomson, who had been with the club since its inception, resigned to take up a post with Imperial Airways in January, and he was succeeded by Flight-Lieut. F. A. Swoffer. The services of an assistant instructor, Mr. W. H. Dudley, were secured in July. Mr. McCracken, the Chief Ground Engineer, was succeeded by Mr. E. Lenny in February. It was found necessary to employ a typist, and a boy for booking and timing flights.

In May, largely owing to the keenness and hard work put in by some members at Bournemouth, a branch of this club was formed. It is

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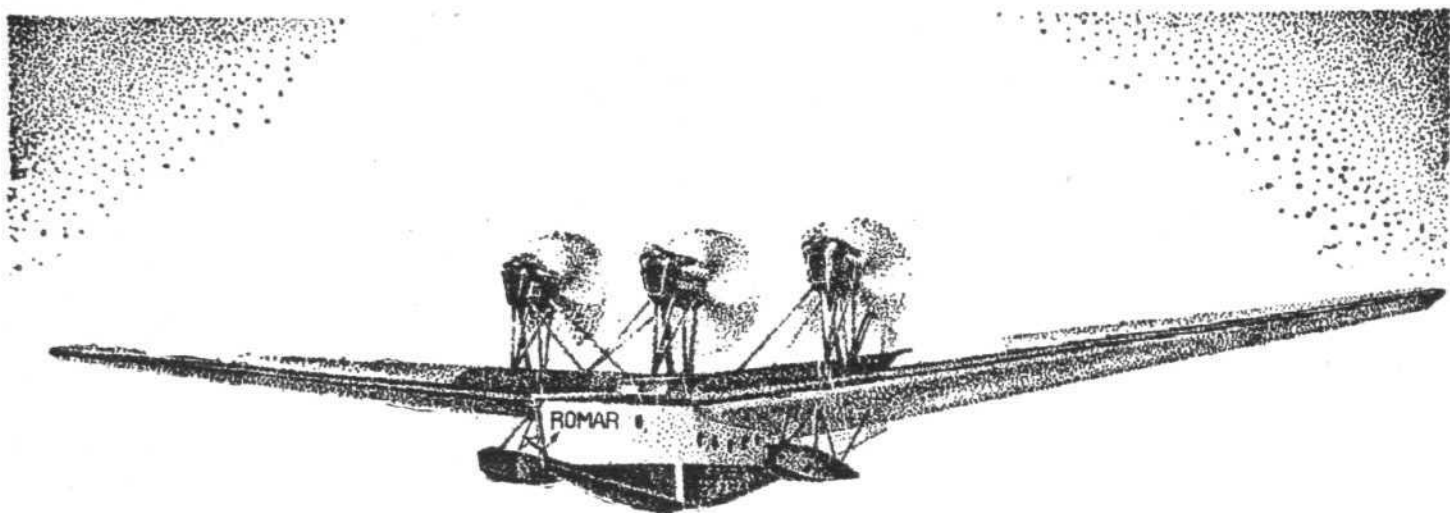
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anticipated that this branch, having survived its early trials and difficulties, will be very successful this year, and it is hoped that it will be possible to instal a machine at Bournemouth permanently instead of flying one over from Hamble.

Mr. O. B. Simmonds, our Managing Director, designed and produced the "Cirrus-Partan" in time for it to be flown in the King's Cup race.

At Whitsun an air pageant was held, but although well organised it did not attract sufficient of the public to make it a financial success. This was particularly disappointing to those keen members who gave up a lot of their time for six months.

On the day of the King's Cup race a small meeting was held which resulted in a little profit being made for the club.

It was found desirable to raise flying fees from 25s. an hour to 30s. an hour, and the change was effected in August.

The club Chairman, Mr. R. J. Parrott, General Manager of Messrs. A. V. Roe & Co., resigned in November last to take up an appointment abroad, and he has been succeeded by Comdr. Ion Tower, R.N.

We have fortunately been free from serious accidents, although one lady member whose machine struck a flagpole in landing last August, was fortunate not to be badly hurt. Unfortunately this machine, the Avian, was out of commission for three months, and we thus lost any chance of obtaining our ambition of flying for 2,000 hours in the year.

Altogether 1928 was a very satisfactory year, and if the weather in 1929 is anything like so favourable we hope to achieve far better results.

We wish a Happy New Year to all other flying clubs.

LANCASHIRE AERO CLUB

REPORT for January 5, 1929.—Flying time, 23 hrs. Instruction, 3 hrs. Solo flights, 13 hrs. 5 mins. Passenger flights, 3 hrs. 45 mins. Tests, 3 hrs. 10 mins.

Instruction: With Mr. Hall—Messrs. Davies, Williams, Goss, Secker, Whitehouse, Ruddy, Mills and Gort.

Pilots: Messrs. Lacayo, Hall, Mills, Gattrell, Harrison, Crosthwaite, Goodfellow, Michelson, Nelson, Cohen, Gort, Chapman, Meads, Williams, Twemlow, Ruddy, Weale, Brown, Dobson, D. E. Hall and J. C. Cantrill.

Passengers: With Mr. R. F. Hall—Messrs. Davies, Goss, Oakley and Miss Baerlein. With Mr. Lacayo—Messrs. Goss, Hartley, Leeming and Miss Harrison. With Mr. Goodfellow—Messrs. Mills and L. G. Hall. With Mr. Meads—Mr. Gillibrand.

This week's report includes two extra days' flying after the re-opening of the club.

The second contest for the Pemberton Trophy was held on Saturday, January 5. The conditions were the same as before except that on this occasion an additional white strip was laid on the ground 175 yards beyond the raised tape and representing the boundary of the forced landing area.

Weather conditions were unpleasant, with a gusty wind and intermittent snow. Fifteen out of the seventeen entrants turned up, but only four of these succeeded in getting safely into the area from 1,000 ft. without engine. Their names in order of placing were: Mr. R. F. Hall, Mr. K. Twemlow, Mr. G. Gort and Mr. P. Michelson. After the competition was over the *ab initio* competitors challenged the senior pilots to have a competition among themselves. The challenge was accepted, and to the great disappointment of the *ab initio*s (not to mention the relief of the seniors) they all succeeded in getting safely into the area.

The hot-pot supper in the evening was attended by over 50 members, and proved as enjoyable as usual. Mr. J. F. Leeming, in his new capacity of Vice-President, presented the prizes to Mr. Hall and Mr. Gort, the latter having won the monthly flying time competitions, for both November and December.

LIVERPOOL & DISTRICT AERO CLUB

REPORT for week ending January 5, 1929.—Machines in commission, WK, XX, XY, Avro "Avians." Instructor, Flight-Lieut. J. B. Allen. Ground Engineer, Mr. Howard Pixton. Total flying time, 20 hrs. Twelve pupils totalled 10 hrs. 5 min. dual. Seven soloists totalled 4 hrs. 5 mins. Seven "A" pilots totalled 3 hrs. 45 mins. Six passengers totalled 1 hr. 5 mins. Twelve test flights total 1 hr.

We are rather pleased at achieving 20 hrs. flying this week, as the weather has been up to its usual standing of excellence (?). Most of our soloists would not feel happy if they had a real horizon to fly by.

Congratulations to Mr. Thornton who passed his tests for aviator's certificate this week—the mist was so thick when he landed from his height test that he had to find his way by following down the smell of castrol he made on his way up.

Mr. Andrews committed his first solo on Saturday afternoon, thus starting the New Year well. Altogether a good week—waiter!

MIDLAND AERO CLUB

REPORT for week ending January 5.—Total flying time was 10 hrs. 33 mins. Dual, 2 hrs. 15 mins.; solo, 4 hrs. 10 mins.; passenger, 1 hr. 45 mins.; test, 43 mins.; cross-country flight, 1 hr. 45 mins.

The following members were given dual instruction by Flight-Lieut. T. Rose, D.F.C., and Mr. W. H. Sutcliffe: Mrs. Leigh Fermor, H. M. Goodwin, L. H. Lee, C. T. Davis, J. K. Stanley, Maj. E. Thomson.

"A" Pilots: S. Duckitt, E. D. Wynn, R. C. Baxter, G. C. Jones, G. V. Perry, R. L. Brinton, J. Cobb, E. R. King, R. L. Jackson.

Solo: W. L. Handley, J. K. Morton, L. H. Lee.

Passengers: Dr. Johnson, R. L. Brinton, J. H. Stevens, G. Taylow, E. Hanson, L. V. Mann, Miss J. M. Davis.

On Tuesday, Mr. Sutcliffe flew LW from Stag Lane Aerodrome to Castle Bromwich on completion of its annual overhaul.

NORFOLK & NORWICH AERO CLUB

REPORT for week ending January 5.—Instructor: Capt. J. C. Houston, M.C. Engineer: A. Kirkby. Machines in Commission: ZW and QX. Total hours flown; 9 hrs. 45 mins. Dual instruction: 7 hrs. 15 mins. Solo training, 25 mins. Licenced pilots: 1 hr. 55 mins. Tests: 10 mins.

We opened again on the 1st after closing for two weeks during which period no crash claims were made. This creates a record.

A strong and necessary effort is being made to reconstruct our internal affairs, and with this object in view, we have been so exceptionally fortunate in securing the services of Capt. J. C. Houston, M.C., who for the past five years has been with the R.A.F. Reserve F.T. School at Renfrew, and is also an ardent supporter of the Scottish Club. Mr. F. Gough has again kindly consented to accept the job of club manager at the same rate of remuneration as previously (come, come). Capt. Houston is already guilty of reviving great enthusiasm among our forlorn members, and our staff are hopping about like canaries, burning with enthusiasm, in fact. Capt. Houston impresses on us the opportunities we have possessing such splendid countryside in Norfolk, and has informed us that all the flat country in the north could be put inside our aerodrome.

We have some really excellent accommodation at the Club in every respect and issue an open and standing invitation to all aviators to come along at any time (except Mondays) and make a stay of it, if necessary.

We shall be pleased to see a few familiar faces at our Annual Dinner which takes place in February; further details will be published later.

One of our lady members, Mrs. J. Dawson-Paul, flew down with a friend to Mauston where they lunched and returned to Norwich having covered some four hundred miles in very unpleasant weather. Another lady aviator to visit the club this week was Mrs. Frank Courtney who flew down from Stag Lane in a "Gipsy Moth," piloted by Capt. Reeves, M.C., mostly through snow storms. The ladies certainly don't worry about weather. Doubtless, there will soon be a new fashion in vogue known as "That Aviator's complexion."

SUFFOLK AEROPLANE CLUB

REPORT for week ending January 6.—Instructor: G. E. Lowdell, A.F.M. Ground engineers: "A" and "C" Mr. Shearman; "A," G. Keeley. Three Blackburn "Bluebirds," RE, SZ and UH. Flying time, 7 hrs. 5 members were given dual instruction (2 hrs.). Flights were made by four "A" licence members (3 hrs. 30 mins.). 2 passengers were carried (1 hr. 0 mins.). 5 tests were made (25 mins.).

No report was sent in the week before the holidays. The total flying time for the week ending December 23 was 15 hrs. 45 mins. The chief item of interest was that Mr. Collingwood completed his tests for "A" Licence.

The week under review only started on Tuesday, on which day the weather successfully kept all machines snug in their sheds. Mr. Payne started instruction during the week. Such flying as has been possible was carried out in winds such as are beloved by those hemen at Shoreham, and at other times the snow made us think that we were the Suffolk Skiplane Club.

Mr. Mayhew, our "C" licence ground engineer, has again fallen a victim to the British climate, and during his absence Mr. Shearman of the Blackburn Aeroplane Co., Ltd., stationed at Martlesham, has again kindly come to our rescue.

FROM THE FLYING SCHOOLS

Brooklands School of Flying, Brooklands Aerodrome

REPORT for week ending January 6.—Instructor: Capt. R. A. Jones. Flying time: 6 hrs. Machines in commission: 2, Renault Avros, G-EBVE and WJ.

Flying time is very low this week owing to the very wintry weather.

Mr. C. S. Burney, the well-known motor cyclist, flew his first solo this week and performed exceedingly well.

The De Havilland Flying School, Stag Lane Aerodrome

REPORT for week ending January 6, 1929.—Total flying time, 56 hrs. Instruction: dual, 6 hrs. 25 mins.; solo, 7 hrs. 25 mins. Other flying, 42 hrs. 10 mins.

Mr. C. S. Napier, son of Mr. Montague Napier, chief of the famous aero-engine firm, successfully completed his tests for "A" licence, and Mr. G. M. Gittins passed his night flying test, thus completing all tests for "B" licence.

Capt. W. R. Bailey took delivery of his Coupé-Gipsy "Moth," this being the first production coupé.

Ten "Moths" were tested and despatched, in addition to the usual weekly quota for Canada and Australia.

Hull's Air Port

THE Hull Chamber of Commerce and Shipping received a report recently on the proposed air developments for Hull. A scheme was outlined by the President (Maj. A. J. Atkinson) at a meeting at which Sir Sefton Brancker was present, which proposed the formation of a company with a capital of £150,000, to provide four seaplanes for a Northern European service at a cost of £100,000 with £50,000 for initial expenses. The seaplane base may be on the River Humber and a land base on the bank. Estimated cost for a service is between £60,000 and £70,000 per year, and it is thought that the income from the surcharge on mails would about equal the amount. Sir Sefton Brancker told the Committee that Imperial Airways had a mail contract from the Government which gave a monopoly of subsidy within Europe, and that there was no incentive for Imperial Airways to start a service between Hull and the Continent unless the British Government were prepared to provide a fresh subsidy. He indicated that it was just possible if good facilities were provided locally, that Imperial Airways might think of transferring

some of their present mileage on the Continent to a service from Hull to Amsterdam or Hamburg.

Sir Sefton said the Government were not prepared to assist financially the development of municipal aerodromes, but that the National Flying Services, Ltd., would receive a bonus from the Government on each pilot turned out, and, in return, had guaranteed to provide directly or indirectly 20 new aerodromes and 80 new landing places. He suggested that the company might be prepared to assist the municipality in the establishment of an aerodrome, and to give a guarantee of income. He visualised all the big cities in the North of England providing landing facilities, and a single operating company establishing services, first between Hull and Amsterdam, or Hamburg, and then extending westwards to the big cities in the North of England. Sir Sefton said he would inform Imperial Airways and the Cobham-Blackburn-Gladstone organisation of the requirements of Hull, and that he would suggest to Imperial Airways that they might deflect mileage from their London-Brussels-Cologne service to a service between Hull and Amsterdam.

AIRISMS FROM THE FOUR WINDS

Endurance Record

THE United States Army aeroplane, the *Question Mark*, a Fokker monoplane fitted with three engines, landed at 2.12 p.m. on January 7, having flown continuously for six days, six hours, and 46 mins., or 150 hrs. 46 mins. It was forced to descend then owing to trouble with one engine. Had it remained aloft until 7.27 a.m. the following morning, it would have been flying a week. On Saturday night, the crew saw one of the engines slowing down (they could not hear it owing to temporary deafness), and prepared to land then, but it picked up again. During the long flight, which started on January 1 over Los Angeles, the machine was constantly refuelled by other Army aircraft and provisions, etc., were also transferred for the crew, 16 replenishments taking place. The crew numbered five. Major Carl Spatz, was in command, Capt. Ira Eaker was chief pilot, Lieut. Elwood Quesada and Lieut. Harry Halverson were assistant pilots, and Sergt. Roy Hooe was the mechanic. A good landing was made at the end. The previous record for sustained flight was 118 hrs., by the French dirigible *Dixmude*.

Refuelling in the Air

IMPORTANT tests in refuelling aircraft during flight have been successfully completed at Le Bourget by the 34th Aviation Regiment. They were carried out at the request of the Aero Club de France, and the organisers of the annual aviation fête at Vincennes. Commandant Weiss and Capt. Wackenheim passed oil and petrol to other machines flying at a height of 2,500 ft. The operations offered no difficulties.

Australia Air Race

THE Centenary Committee has decided to call the Sydney to Perth air race, to be held in September or October, the "Western Australia Centenary East-West Air Race." The distance to be flown is 2,400 miles, divided into six stages of one day each. The prizes are:—First, £1,000; second, £300; third, £100. Also £100 will be distributed each day in prizes of £50, £30 and £20 for the three best daily performances. The entrance fee is five guineas, and the race is open to the world.

New Women's Record

MISS BOBBIE TROUT made an endurance flight of 12 hrs. 11 min. at Los Angeles on January 3, which is claimed as a record. She is only 19 years of age.

Lady Heath

It is stated that Lady Heath has resigned her presidency of the Air League of the British Empire, but not her membership. It is also mentioned that Lady Heath, who is now touring America, will be away from this country for a year, and has decided to go on to Australia.

Seaplane Missing

A SEAPLANE which left Cartagena for Melilla on December 31, did not arrive, and a search was made for it.

Serum by Air

CAPT. MAY flew an Avro "Avian" light aeroplane carrying anti-diphtheritic serum to Fort Vermilion, Northern Alberta, where diphtheria had broken out. He reached Peace River on the morning of January 3, and continued in the afternoon to Fort Vermilion. Dog teams then carried the serum the remaining 50 miles to Red River, where the disease has also spread. Capt. May started on his return flight and reached Peace River on January 4. This stage of 3 hours happened on the coldest day this winter and in a head wind all the way.

Successful Aerial Prospecting in Canada

NORTHERN Aerial Minerals Exploration, Ltd., a Canadian company organised some months back by Mr. Jack Hammell, has concluded its first season's operations and is announced, to have made four promising mineral discoveries. The best in the opinion of Mr. Hammell, is a gold find at Crow Lake, in the Patricia district of western Ontario. This has been opened up for 1,100 ft. and is to be sampled as soon as the aeroplane can be fitted with skis. Another find is copper-lead-silver in the Athabaska Lake region. The other discoveries, the one copper and the other gold, are in localities which Mr. Hammell declines to discuss at the moment. This company's planes flew over 100,000 miles in the course of the season's work. One hundred men were in the field, and

it is planned to have more out next year. "It has been a good year," Mr. Hammell says, "and I am thoroughly pleased."

Canadian Air Mail Results

Post Office statistics show that 235,793 lbs. of air mail were carried over the various routes throughout the Dominion up to the week ending December 8, 1928.

Airship Mast at Quebec

THE mooring mast at St. Hubert, Quebec, which is 220 ft. high, and has been constructed for the reception of the airships planned to carry out an Empire air service, is now completed.

Archdukes' Crash

THE Archdukes Antoine and Francois Joseph of Hapsburg were injured near Dijon, France, on January 6, when the light aeroplane in which they were flying from Paris to Barcelona, Spain, crashed. Both, it is stated, are expert pilots, and they tried to come down in a field, but swerved to avoid a man and hit waste land. Both live in Barcelona. They left London on January 3, and had been detained at Abbeville by bad weather. A leaky petrol tank was the cause of the forced landing.

Marseilles-Beirut Air Service

THIS month the French Air Union anticipates starting an air service between Marseilles and Beirut, when the French Government and local authorities will have signed the postal convention with a provision for a surtax on air mails. A trial service has been carried out by seaplanes each fitted with three 180 h.p. engines. A relay system of service is to be employed to reduce strain on the crews and machines, and to ensure a more reliable and quicker service. It necessitates a large fleet of aircraft and four more seaplanes will be added, each fitted with two 500 h.p. engines in tandem. The route will run in an almost direct line from Marseilles to Beirut, with intermediate calling ports at Bastia, Naples, Corfu, the Piræus and Castellorizo. When the service is firmly established an extension to the Far East may be attempted in co-operation with Imperial Airways.

World's Record for Czechoslovakia

ALTHOUGH Maj. A. Vicherek, of the Czechoslovakian Air Force, who set out from Prague on October 5 last in an "Avia B.H. 11-B" monoplane with the intention of beating the world's record for distance (light 'plane class, 3rd category), did not complete his flight as originally planned, he succeeded, in establishing a record. He had intended flying to Moscow and Omsk; but a heavy snow storm forced him down near Biednodiem-janovsk in Russia. The total distance covered (he had to fly off the straight line track owing to Russian restrictions) was about 2,500 km., and the time in the air was 15 hrs. 20 mins. Last month the F.A.I. homologated this flight as a record, with a distance of 2,011 km. and Maj. Vicherek thus beat the previous record of 1,564 km. established in America on February 21, 1928, by H. J. Brooks on a Ford "Fliver." The "Avia B.H. 11-B" used for this flight was the well-known touring low-wing monoplane, fitted with a 60-h.p. "Walter" air-cooled radial, converted into a single-seater and provided with extra large petrol tanks—containing fuel sufficient for a flight of at least 30 hours' duration. The weight of the machine empty was 347 kg., and fully laden 817 kg.

Col. Lawrence

AN official *communiqué*, issued on January 7, and reported from Delhi, India, stated that in view of the increasing but totally unfounded and preposterous rumours connecting Aircraftman Shaw (formerly Col. Lawrence, of Arabia) with events on the Afghan side of the border, the Government of India has decided to transfer him from the north-west Frontier Province, where he was stationed in the ordinary course of service with the Royal Air Force at Miranshah. He flew to Lahore on January 8, and is going on to Karachi to catch the first boat to England for transfer to a home establishment. He flatly denied the smallest connection with the troubles in Afghanistan.

Schneider Trophy Race

IT is reported that Lieut. Alford Williams is expected to be one of the pilots chosen by America to compete for that country in the next Schneider Trophy Race at the Solent.



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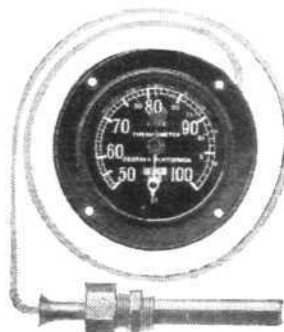
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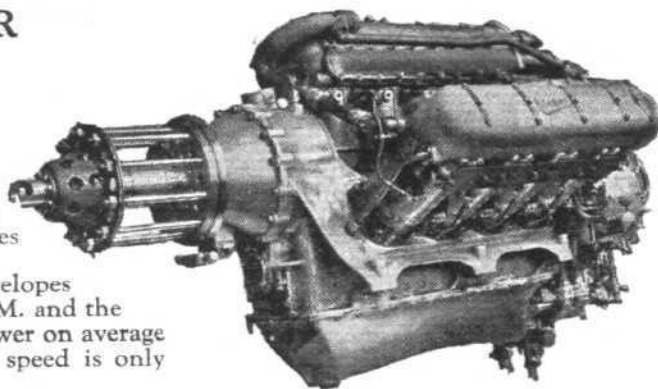
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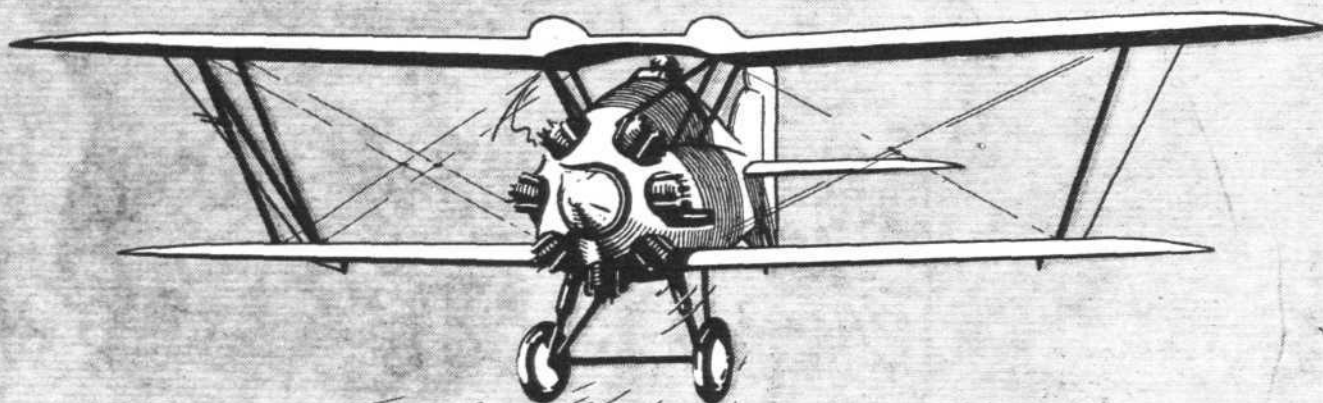
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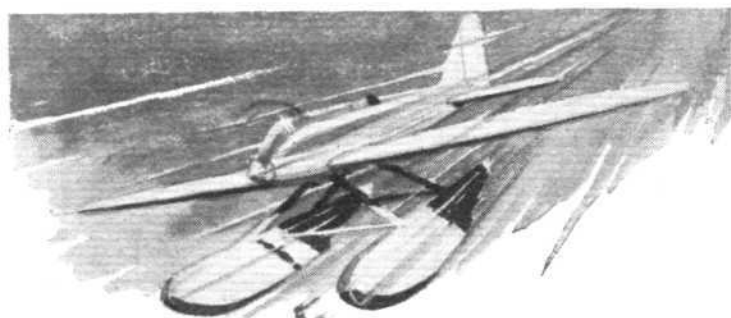
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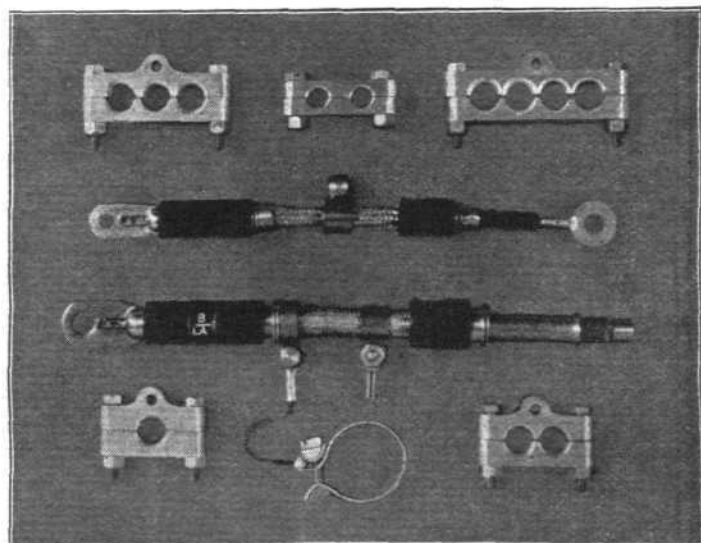
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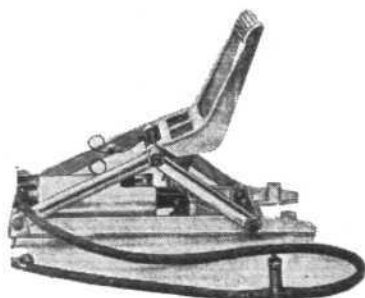
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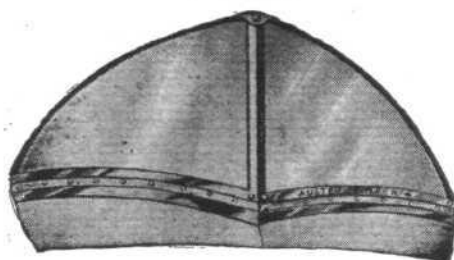
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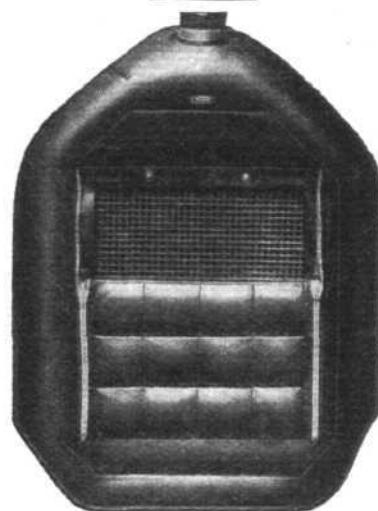


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THE ROYAL AIR FORCE

London Gazette, January 1, 1929

General Duties Branch

Air Chief Marshal Sir John M. Salmond, K.C.B., C.M.G., C.V.O., D.S.O., Principal Air Aide-de-Camp to the King, is appointed a Member of the Air Council as Air Member for Personnel (January 1) (vice Air Vice-Marshal Sir Philip Woolcott Game, K.C.B., D.S.O.).

Air Vice-Marshal Sir Philip W. Game, K.C.B., D.S.O., relinquishes his appointment as a Member of the Air Council on retirement from the Royal Air Force (January 1).

The follg. are granted short service commns. as Pilot Officers on probation with effect from and with seniority of December 28, 1928:—F. E. Abbott, F. R. Bevan, J. A. Brown, C. R. Crow, J. S. Douglas, G. M. Easton, E. Esmonde, J. W. C. Glen, D. B. Knapp, H. V. L'Amey, A. E. V. Mathias, W. S. Monroe, G. B. Musson, A. T. Orchard, G. M. Payne, T. J. Rees, G. H. Robertson, E. G. Sharp, J. A. Simpson (2nd Lieut., 19th London Regt., T.A.), G. R. Warner, E. F. Wheeler.

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the R.A.F. are notified:—
General Duties Branch

Air Chief Marshal: Sir J. M. Salmond, K.C.B., C.M.G., C.V.O., D.S.O., to Air Ministry, on appointment as Air Member for Personnel; 1.1.29.

Air Vice-Marshal: Sir E. L. Ellington, K.C.B., C.M.G., C.B.E., to H.Q., Air Defence of Great Britain, on appointment as Air Officer Commanding; 1.1.29. F. R. Scarlett, C.B., D.S.O., to H.Q., Fighting Area, Uxbridge, on appointment as Air Officer Commanding; 1.1.29.

Air Commodore: F. V. Holt, C.M.G., D.S.O., to Air Ministry, on appointment as Director of Technical Development; 7.12.28.

Group Captains: A. S. Barratt, C.M.G., M.C., to R.A.F. Staff College, Andover, for duty as Instructor; 1.1.29. J. T. Cull, D.S.O., to H.Q., Wessex Bombing Area, Andover, for Air Staff duties; 7.1.29.

Squadron-Leader: J. K. Summers, M.C., to H.Q., Air Defence of Great Britain, Uxbridge; 23.12.28.

Flying Officer N. Liddall is granted permission to retain the rank of Fligh Lieut. on being placed on retired list on account of ill-health (July 13, 1928).
Air Vice-Marshal Sir P. W. Game, K.C.B., D.S.O., is placed on the retired list at his own request (January 1).

The follg. Flying Officers are transferred to the Reserve:—Class A.—A. W. G. Martin (December 31, 1928). Class C.—L. S. Birt (January 1).

The follg. Pilot Officers on probation resign their short service commns.:—J. S. Tanner (December 18, 1928); E. S. Bateman (December 20, 1928).

The short service commn. of Pilot Officer on probation R. H. Spurrier is terminated on cessation of duty (December 15, 1928); Air Commodore L. F. Blandy, C.B., D.S.O. (Col., Reserve List, R.E.), relinquishes his temp. commn. on completion of service with R.A.F. (November 30, 1928); Lieut. F. W. Bourne, R.N., Flying Officer, R.A.F., relinquishes his temp. commn. in R.A.F. on resigning his commn. in the R.N. (November 11, 1928).

Flying Officer J. L. Adams is dismissed the Service by sentence of General Court Martial (December 17, 1928).

Flight-Lieuts.: F. Beaumont, to Station H.Q. and Storage Section, Andover; 21.1.29. L. W. Jarvis, to R.A.F. Depot, Uxbridge, for Administrative Duties; 21.12.28. C. O. Towler, to R.A.F. Reception Depot, West Drayton; 16.12.28. J. V. Kelly, to No. 29 Sqdn., North Weald; 22.1.29. C. E. N. Guest, to No. 22 Sqdn., Martlesham Heath; 14.1.29. G. C. Gardiner, D.F.C., to Air Ministry (Directorate of Training); 21.12.28. A. L. Paxton, D.F.C., to Central Fyling School, Wittering; 21.12.28. C. W. Busk, M.C., to Armament and Gunnery School, Eastchurch; 6.1.29. E. P. M. Davis, A.F.C., A.M., to Marine Aircraft Experimental Estab., Felixstowe; 17.12.28. G. E. Ranson, to No. 5 Flying Training School, Sealand; 3.1.29. W. A. B. Bowen-Buscarlet, to H.Q., Egypt; 21.12.28. W. A. D. Brook, to School of Army Co-operation, Old Sarum; 27.11.28. N. C. Ogilvie Forbes, to No. 201 Sqdn., Calshot; 15.1.29. A. Rowan, to H.Q., Egypt; 14.12.28. G. F. Moody, to R.A.F. Depot, Egypt; 7.12.28. C. R. Kearv, to H.Q., Fighting Area, Uxbridge; 1.1.29.

DE HAVILLAND AIRCRAFT COMPANY

Annual Report

On December 31 the Annual General Meeting of the De Havilland Aircraft Co., Ltd., was held at Stag Lane Aerodrome, Edgware. The chairman, Mr. A. S. Butler, said in his address that the profit figure of £19,701 as against £18,351 the previous year, did not show the proportionate increase that might be expected with the increase of capital. That was due almost entirely to the fact that they had had considerable difficulty in getting their engine production programme started. Those difficulties arose through causes beyond their control, and although now entirely overcome they had restricted the output of "Moths" during the latter part of the year under review. The general policy had been one of continued expansion, and necessarily required a considerable amount of money. In that connection they had turned the company into a public company, and were calling for £120,000.

The "Moth" continued to comprise the most important part of the business, and the demand had considerably exceeded their highest expectations. In the last twelve months 336 machines had been delivered, as compared with 117 for the previous year. At the present time their output was fully booked up at the rate of 16 machines per week until well into April. A metal "Moth" had been designed, and was now in use in Canada and elsewhere.

A company called The Moth Aircraft Corporation of America had been formed to manufacture the Gipsy-Moth under licence, and big benefits were expected when production began in the Spring. As an example of orders the De Havilland Company was getting for "Moths," the Chilean Government recently ordered 60 machines as standard training equipment for their Air Force.

The Gipsy engines were now coming out at 20 a week, and the figure was steadily being increased. They hoped to be able to take care of at least 30 a week in the early part of this

year. In connection with this Gipsy engine an agreement had been concluded with the Wright "Whirlwind" aero-engine manufacturers by which they will manufacture Gipsy engines in America.

The position of their associated Australian company, De Havilland Aircraft Proprietary, Ltd., had been considerably improved by the adoption of a "Moth" as a standard preliminary training machine of the Royal Australian Air Force, and the order for four D.H. "Hercules" machines. Those large three-engined machines were at present nearing completion, and were for delivery to Western Australian Airways for a service between Perth in Western Australia and Adelaide in South Australia.

Their Canadian developments were so important that Mr. Hearle, the general manager and himself (Mr. Butler) were sailing for Toronto on January 9. The Indian market they felt was so important to-day that they had now sent a representative to that country to report upon the opportunities existing there. Five D.H.61 aircraft of the new six-eight seater commercial type had been completed, and been despatched—two to Australia, two to Canada and one to the *Daily Mail* in this country. A new type of commercial machine—a four-passenger cabin monoplane—called the "Hawk-Moth" had been completed and flown. It was fitted with an engine manufactured entirely by themselves called the "Ghost."

The company now employed at full-time 1,560, and they believed they would be able to employ many more. This time last year their total employees numbered 400.

The report and accounts were adopted and Mr. A. S. Hirst proposed a hearty vote of thanks to the chairman and directors for their able and successful conduct of the business during the year, and congratulated them on their energy and foresight in forming companies in Australia and Canada.

PERSONALS

Married

On December 18 FLYING-OFFICER GEORGE DOUGLAS GREEN, R.A.F., only son of the late Dr. Green, of Portmadoc, and of Mrs. Green, 5, Elm-park road, Chelsea, was married to DOROTHY MARY, only daughter of COL. J. P. C. and Mrs. HENNESSY, and granddaughter of Maj.-Gen. Sir Aliston Toker, K.C.B.

ARTHUR W. B. McDONALD, R.A.F., elder son of Dr. and Mrs. McDonald, of Antigua, was married on December 15 at St. Luke's Church, Grayshott, to MARY, eldest daughter of Dr. and Mrs. RONALD GRAY, of Hindhead.

To be Married

An engagement is announced between CAPTAIN GEORGE CECIL BLENCOVE COTTERELL, late Nigerian Political Service and R.A.F., eldest son of the late Morton Blencove Cotterell and Mrs. Richard Bond, Bryancliffe, Wilmslow, and MARY WANKLYN, younger daughter of Mr. and Mrs. JOHN BLACK, British Linen Bank, Wigtown, Scotland.

An engagement is announced between SQUADRON LEADER R. M. DRUMMOND, D.S.O., O.B.E., M.C., R.A.F., elder son of Mr. and Mrs. J. M. Drum-

mond, of Cottesloe, Western Australia, and ISABEL RACHAEL MARY, only daughter of the late PARIS F. DRAKE-BROCKMAN and Mrs. DRAKE-BROCKMAN of Cintra Park, Norwood, London.

The engagement is announced between JOHN FRANCIS PATRICK GALLAGHER, L.R.C.P. and S.L., late Captain, R.A.F.M.S., only child of the late Mr. Patrick Gallagher, J.P., and of Mrs. Gallagher, of Ardrougher House, Co. Donegal, and KATHARINE BERYL, eldest daughter of LORD AND LADY INCHTQUIN, of Dromoland Castle, Co. Clare.

The engagement is announced of Mr. WALTER ROY MONRO HIGGS, R.A.F., only son of Mr. and Mrs. W. Monro Higgs, of the Causeway, Horsham, and BEATRICE, only daughter of Mr. C. E. MILNES HEY and of the late Mrs. Milnes Hey, of The Croft, Slinfold, Sussex.

The marriage arranged between Mr. H. W. PEARSON-ROGERS, R.A.F., and Miss BISSHOFF, will take place at St. Margaret's Church, Westminster, on Tuesday, February 12, at 2.15.

The engagement is announced between Mr. GEOFFREY FREDERICK SIMOND, R.A.F., third son of Mr. C. F. Simond, C.B.E., of 4, Mulberry Walk, S.W., and SYBIL MARY, youngest daughter of Mr. and Mrs. ALFRED COLLINS, of 137, Holden Road, Finchley.

AIR MINISTRY NOTICE TO AIRMEN

Procedure for Aircraft Reporting their Passage Across the Irish Sea
1. Pilots of aircraft proceeding to the Irish Free State from this country are advised that the following arrangements have been made for reporting their passage across the Irish Sea between Holyhead and Baldonnell Aerodrome:—

(i) The Holyhead Meteorological Station to be notified direct by the Pilot of (a) the proposed time of crossing of any aircraft, (b) the type of machine and the registration marking and (c) the names of the crew and passengers. Telegraphic address:—"Meteorological Office, Holyhead." Telephone number:—Holyhead 30.

In the event of the proposed time of crossing being during the week-end, Holyhead Meteorological Station should be notified not later than 1,300 hours on the Saturday.

(ii) Aircraft to circle over the Meteorological Station, Holyhead, before crossing the coast.

The Meteorological Station is situated on Salt Island to the immediate N.E. of Holyhead town.

(iii) The Holyhead Meteorological Station to notify, by telephone or telegram, the Officer Commanding, Army Air Corps, Irish Free State, Baldonnell Aerodrome (Tel. No. Clondalkin 22. Telegraphic Add. "Aviation Baldonnell") of the time of the aircraft's passage over Holyhead "Priority" message.

(iv) The Meteorological Station, Holyhead, to observe the true course made good by the aircraft as long as possible.

(v) Baldonnell to notify the time of arrival of aircraft to the Meteorological Station, Holyhead. "Priority" message.

(vi) In the event of the non-arrival of an aircraft after one hour has elapsed from the departure from Holyhead:—

(a) Baldonnell to notify Seaforth W/T Station (Telephone number:—Waterloo 245; Telegraphic Address:—"Seaforth Radio"), the Meteorological Station, Holyhead, and the Department of Industry and Commerce, Transport and Marine Branch, Dublin. "Priority" messages.

(b) Meteorological Station, Holyhead, to notify Seaforth W/T Station of any information available as to the course made good by the aircraft. "Priority" message.

(c) Seaforth W/T Station to broadcast shipping, giving all details available. 2. In the case of aircraft returning from the Irish Free State, a similar procedure is to be carried out in the reverse direction, viz.:—

(i) (a) The proposed time of crossing of any aircraft, (b) the type of machine and the registration marking, (c) the names of the crew and passengers and (d) the destination, to be notified direct by the pilot to the Officer Commanding, Army Air Corps, Irish Free State, Baldonnell Aerodrome (Telephone number:—Clondalkin 22. Telegraphic Address:—"Aviation Baldonnell"), who will then advise the Holyhead Meteorological Station accordingly. "Priority" messages.

In the event of the proposed time of crossing being during the week-end, Holyhead Meteorological Station should be notified not later than 1300 hours on the Saturday.

(ii) Aircraft to circle over the Meteorological Station, Holyhead, after crossing the Irish Sea.

(iii) The Holyhead Meteorological Station to notify, by telephone or telegram, the Officer Commanding, Army Air Corps, Irish Free State, Baldonnell Aerodrome (Telephone number:—Clondalkin 22. Telegraphic Address:—"Aviation Baldonnell") of the time of the aircraft's passage over Holyhead. "Priority" message.

(iv) In the event of the non-arrival of an aircraft after one hour has elapsed from the departure time from Baldonnell:—

(a) The Holyhead Meteorological Station to notify Seaforth W/T Station, and the Officer Commanding, Army Air Corps, Irish Free State, Baldonnell Aerodrome (Telephone number:—Clondalkin 22. Telegraphic Address:—"Aviation Baldonnell") of all the facts. Baldonnell Aerodrome will notify in addition the Department of Industry and Commerce, Transport and Marine Branch, Dublin. "Priority" messages.

(b) Seaforth W/T Station to broadcast shipping, giving all details available.

3. In order to obviate any unnecessary signals and expense it is of particular importance that pilots taking advantage of the system should ensure that upon landing at Baldonnell on the outward journey, or at a British aerodrome on the inward journey, an arrival signal is immediately despatched to Holyhead.

4. This procedure is applicable for all flights in either direction between Holyhead and Baldonnell irrespective of what the British aerodrome of initial departure or final destination may be, but whenever it is desired to use an aerodrome other than an appointed customs aerodrome, arrangements must be made in advance for customs clearance elsewhere.

5. "Air Pilot."—A copy of this notice should be inserted in the "Air Pilot—Great Britain" after Page 12A (published in A.P.M.S. 11) and numbered pages 12B, C and D.

6. Notices to Airmen Nos. 51 and 102 of 1927 are hereby cancelled. (No. 82 of 1928)

R.A.E.S. AND INST.AE.E.

Official Notice

The following is the Lecture Programme for the second half of Session 1928-29:—

1929.
Jan. 10. Prof. J.B. Melville-Jones, A.F.C., F.R.Ae.S. "The Performance of the Streamline Aeroplane."
" 24. Informal Discussion and Dinner. Subject: "The Compression Ignition Engine for Aircraft." St. Ermin's Hotel, Westminster, 7.30 p.m. Tickets 6s. 6d.
" 31. Mr. W. S. Farren, F.R.Ae.S., M.I.Ae.E. "Monoplane or Biplane?"
Feb. 14. Mr. A. H. R. Fedden, F.R.Ae.S. "Air-Cooled Engines in Service."
" 28. Mr. R. A. Frazer, B.Sc., A.F.R.Ae.S. "The Flutter of Aeroplane Wings."
Mar. 7. Mr. C. N. H. Lock. "Aircscrew Body Interference."
" 14. Wing-Commr. C. B. Hynes, D.S.O., R.A.F. "Engine Performance Tests."
" 18. Mr. V. Isacco. "The Helicogyre."
Apr. 11. M. Lapresle. "Wind Tunnel Methods of the Eiffel Laboratory."
" 18. Col. V. C. Richmond, O.B.E., A.F.R.Ae.S. "R. 101."
It is also hoped to arrange for the following lectures:—
Group Capt. H. M. Cave-Browne-Cave, D.S.O., D.F.C. "The Results and Experiences of the Far East Flight."
Major G. H. Scott, C.B.E., A.F.C. "Mooring and Handling of Airships."
Major C. K. Cochran-Patrick, D.S.O., M.C. "Aerial Survey in East Africa."
Capt. F. Tymms, M.C., A.F.R.Ae.S. "Experiences in Egypt."
Capt. D. Sinclair, M.I.Rad.E. "Wireless Telephony as Applied to Aircraft."

Note.—With the exception of the Dinner and Discussion on January 24, all lectures will be held at 6.30 p.m. at the Royal Society of Arts, 18, John Street, Adelphi, W.C.2.

THE WESTLAND AIRCRAFT SOCIETY

A VERY warm welcome was given to Wing-Commander R. M. Hill, M.C., A.F.C., R.A.F., when he visited Yeovil on January 2, to give an illustrated lecture on "The Cairo-Baghdad Air Mail," under the auspices of the Westland Aircraft Society. Commander Hill, who is now an instructor at the Staff College, was formerly in charge of the squadron responsible for this service, and his visit to Yeovil was particularly interesting, in view of the fact that he is a brother of Capt. G. T. R. Hill, of the Westland Works, designer of the Hill-Pterodactyl tailless aeroplane, and also because the Westland Works chief test pilot, Flt.-Lieut. L. Paget was formerly a member of the Air Mail Squadron under Commander Hill, and the audience had no difficulty in recognising him amongst the cheery group depicted on one of the interesting series of lantern slides made from snapshots taken by the lecturer.

Wing-Commander Hill opened his address by remarking that in 1921, when the momentous decision was taken to open a desert route from Trans-jordan to Iraq, it brought Baghdad, roughly speaking, about 19 days nearer to London. It could not have been pioneered by a civil organisation, as the first crossings were in the nature of a military operation. A track was made over the proposed route by wheel tracks of motors supplemented by the marks of a tractor, by means of which the aeroplanes were guided to keep their course. There were special landing stages at intervals and two huge underground petrol stores. The desert, or steppe land, was shown to be quite treeless, with uneven landing surfaces, particularly in the region of the black basalt hills, and subject to intense heat and sudden flooding in the winter months. Without wireless it would have been almost impossible to carry on a regular service. Not only mails, but urgent medical supplies, sick and injured people and tiny children were carried. In 1926, the service was handed over to the Imperial Airways, who introduced machines specially designed for the climate. It was hoped to extend the service to India early this year, and eventually on to Australia.

The lecturer was introduced by Mr. P. W. Petter, managing director of Petters, Ltd., in the absence, through indisposition, of the president, Mr. R. A. Bruce, O.B.E., and Flt.-Lieut. Paget, in proposing a vote of thanks to the lecturer, referred humorously to the lighter side of his own experiences during his service in Wing-Commander Hill's squadron.

On one occasion, he said, they had on board a large box of kippers, and owing to the combined effects of the heat and a three-days forced landing, it became a question as to whether the pilot or the box of kippers should fly the machine. Eventually the matter was settled by giving the offending kippers a decent burial at least half-a-mile from the 'plane, to allow the pilot to recuperate sufficiently to finish the journey!

PUBLICATIONS RECEIVED

The Woodworker. Annual Volume No. XXXII. 1928. Evans Brothers, Ltd., Montague House, Russell Square, London, W.C.1. Price 6s. 6d. net.

Air Pilot Monthly Supplement. No. 49. November, 1928. Air Ministry, Kingsway, London, W.C.2.

The South American Handbook, 1929. Edited by J. A. Hunter. South American Publications, Ltd., Atlantic House, Moorgate, London, E.C.2. Price 2s. 6d. net.

Pictorial Calendar, 1929. "Way Down East: Blackburn Iris." The Blackburn Aeroplane and Motor Co., Ltd., Amberley House, Norfolk Street, London, W.C.2.

AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

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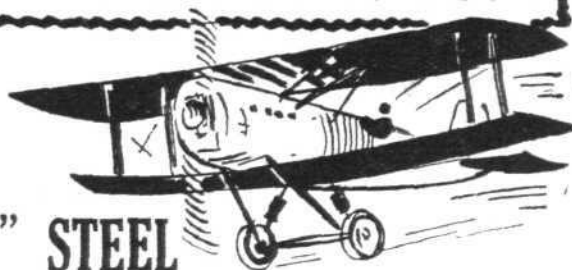
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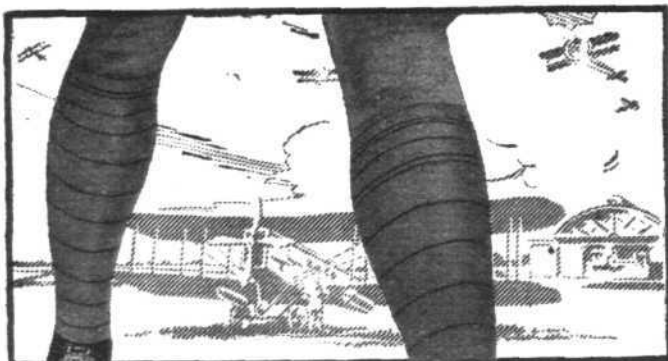
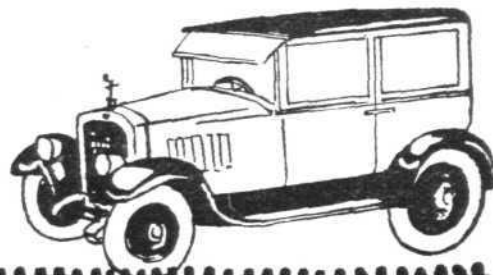
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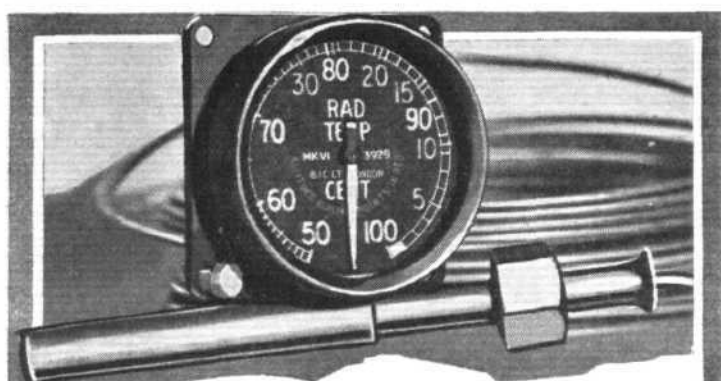
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